

A vindication of Read's patent syringe : against interested opposition and unphilosophical objections, with professional testimonials of its superior utility, and directions by which its employment is rendered easy and certain.

Contributors

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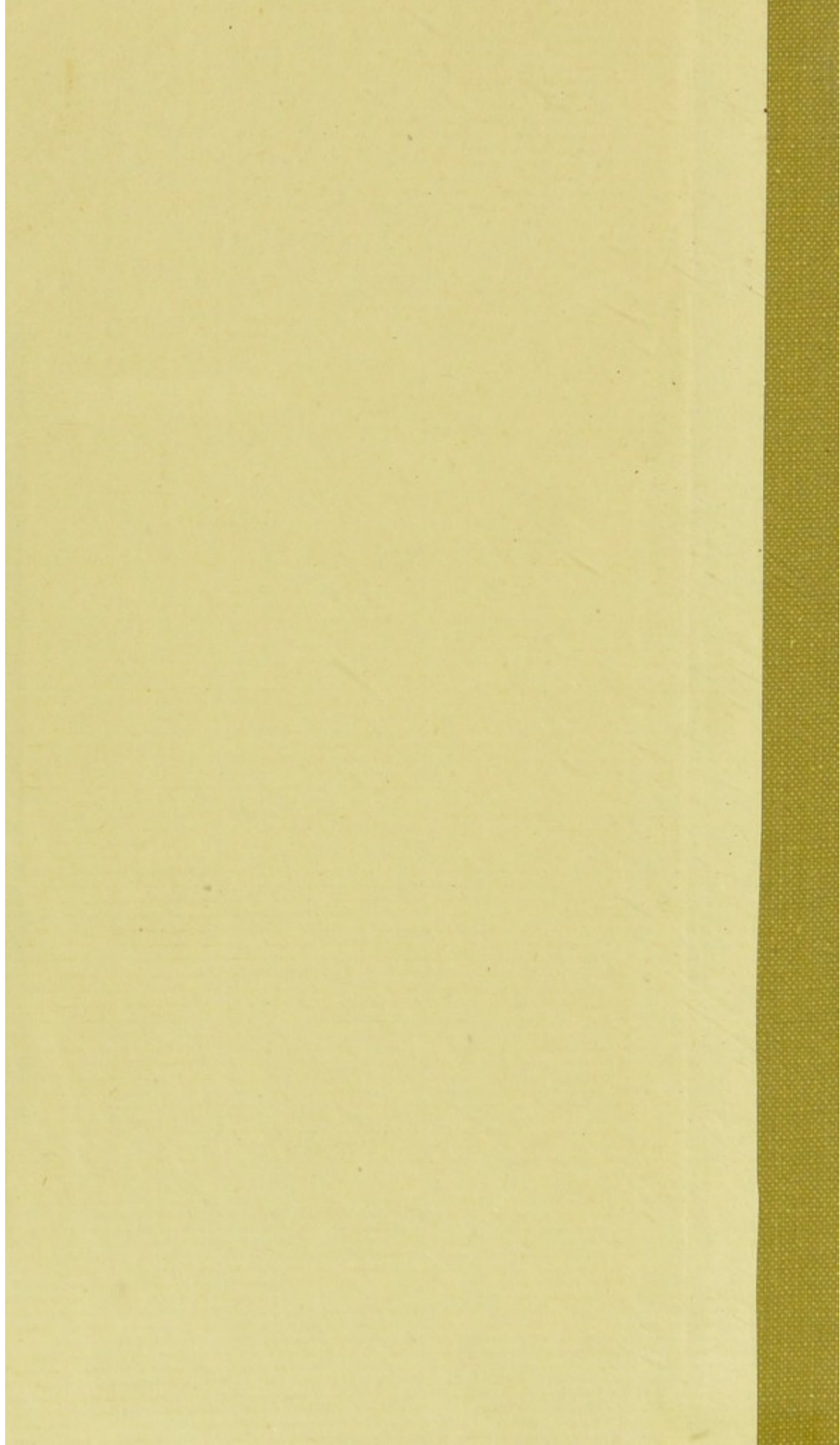
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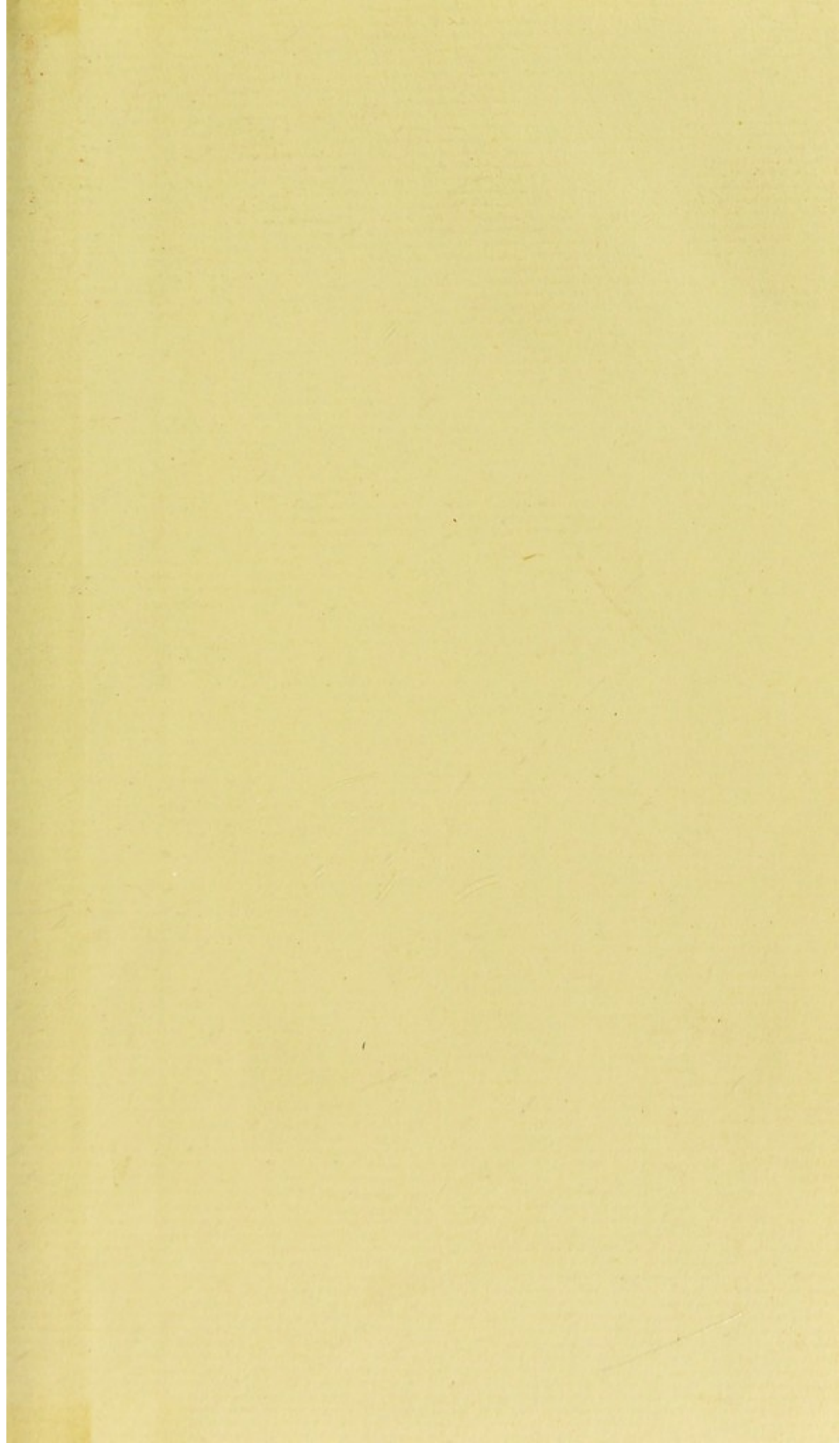
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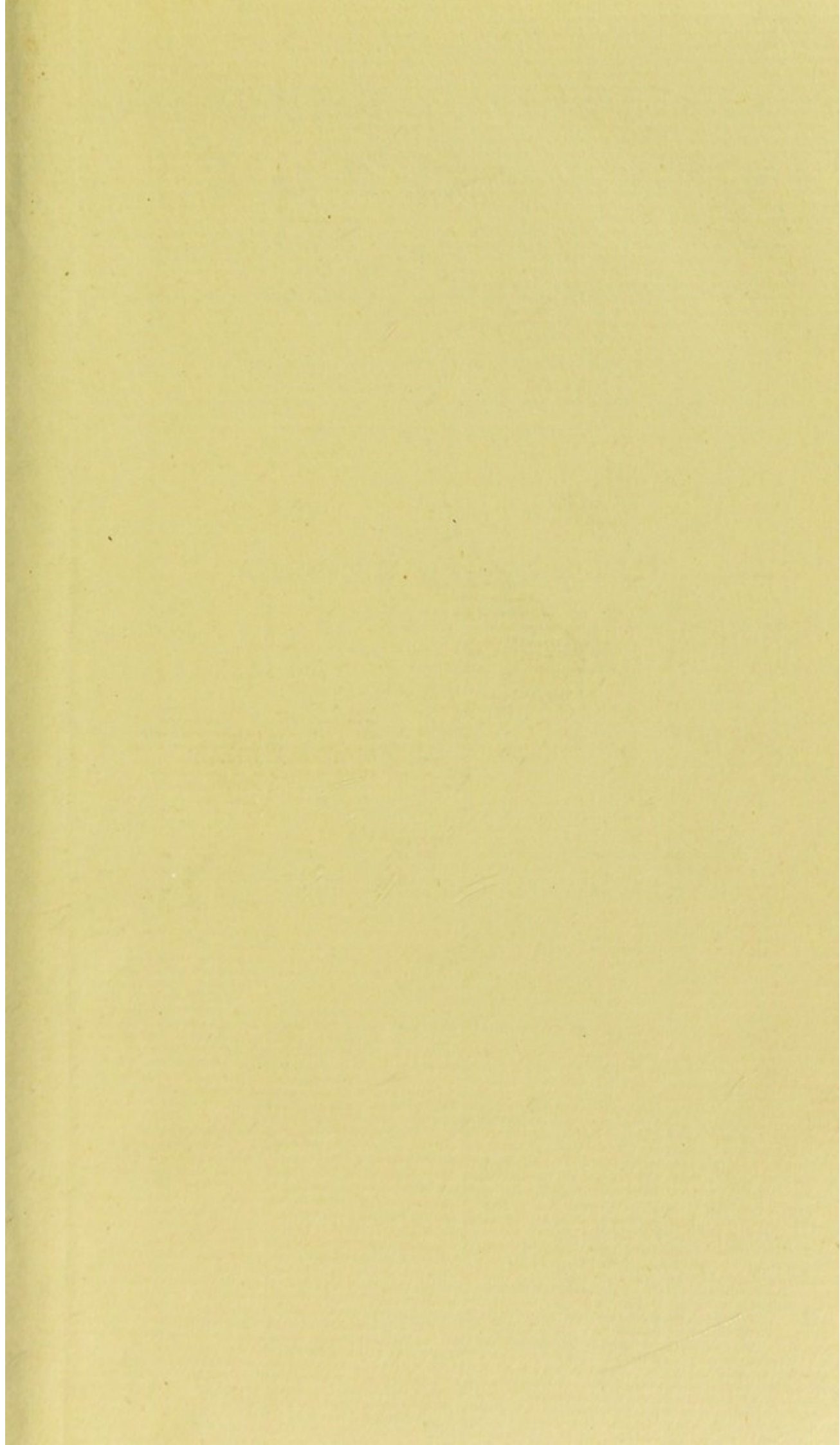


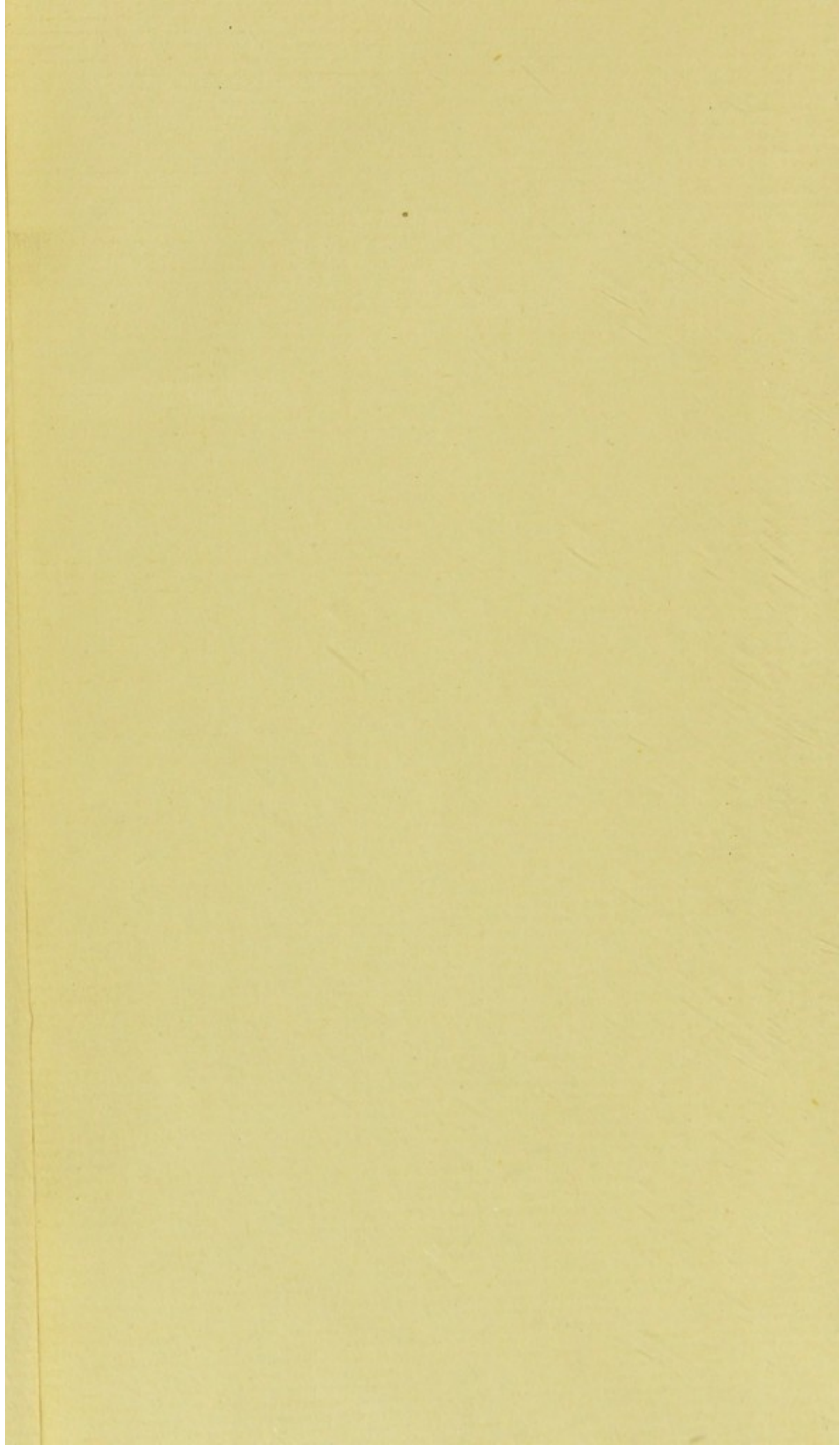




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THE
LONDON MEDICAL AND PHYSICAL
JOURNAL.

CONTAINING
ORIGINAL CORRESPONDENCE OF EMINENT PRACTITIONERS,
AND
CRITICAL ANALYSIS OF NEW WORKS
RELATING TO MEDICINE, SURGERY, MIDWIFERY, CHEMISTRY, PHARMACY,
BOTANY, AND NATURAL HISTORY.

EDITED BY
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OF FOOT GUARDS.

VOL. LV.
FROM JANUARY TO JUNE, 1826.

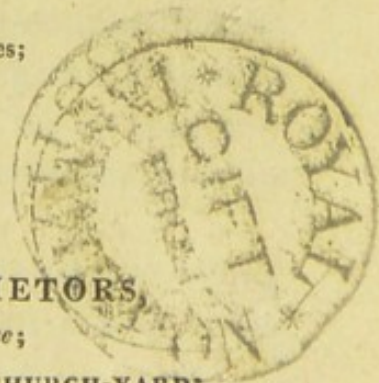
Et quoniam variant morbi, variabimus artes;
Mille mali species, mille salutis erunt.

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JOURNAL

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ORIGINAL COMMUNICATIONS OF MEDICAL PRACTITIONERS

CRITICAL ANALYSIS OF NEW BOOKS

AND TO MEDICAL JURISPRUDENCE, MEDICAL CHEMISTRY, PHARMACY,

DIETETICS, AND NATURAL HISTORY.

EDITED BY

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THE LONDON
Medical and Physical Journal.

NO 1 OF VOL. LV.]

JANUARY, 1826.

[NO 323.]

For many fortunate discoveries in medicine, and for the detection of numerous errors, the world is indebted to the rapid circulation of Monthly Journals; and there never existed any work, to which the Faculty, in Europe and America, were under deeper obligations, than to the Medical and Physical Journal of London, now forming a long, but an invaluable, series.—RUSH.

HISTORICAL RETROSPECT.

It has been customary with us, at the present season, to look back upon the path which had brought us to the close of another year, and to endeavour to call to mind and arrange the most prominent and interesting objects which had presented themselves to our notice. On sitting down for this purpose, and endeavouring to select some discoveries in medical science, or new applications of previous knowledge,—such as, by their value and importance, might justify us in separating them from the general mass,—we have felt more strongly than on any former occasion the difficulty of accomplishing this task in a satisfactory manner. Much has been done, when viewed in the aggregate. Many works have been written,—many essays published,—many cases recorded; yet, when we come to examine them in the detail, we find little of pre-eminent merit, and what appeared to us most valuable we have given in various departments of former Numbers. To give the whole is impossible: to select where the demands are so numerous, and the claims so equal,—at best is difficult.

There are two objects which may be had in view in laying before our readers an HISTORICAL RETROSPECT: it may either

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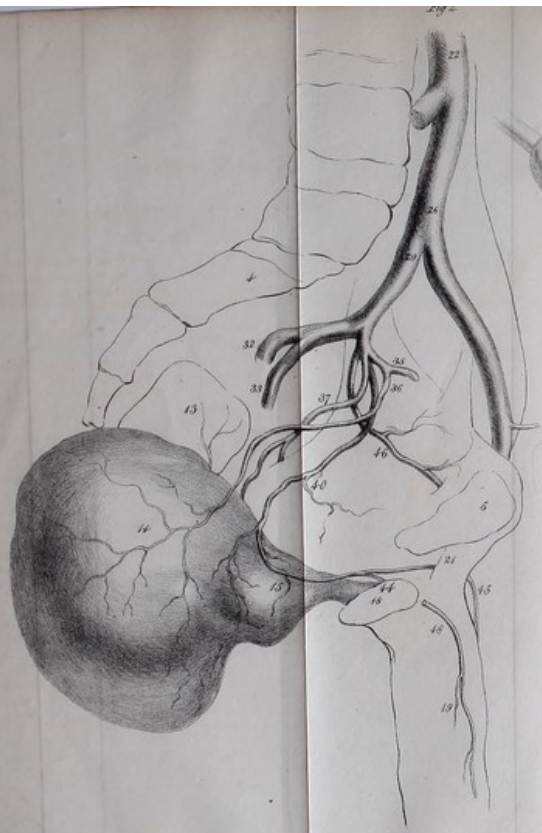
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be intended for general perusal, or be regarded merely as a work of reference on individual subjects.

To do any justice to this kind of compilation, unavoidably extends it so much as to interfere with (if not to supersede) some of the other departments; while, from its very nature embracing as it does such a multiplicity of unconnected subjects, we strongly suspect that it was less read than other parts of the Journal, even when executed in the very superior manner which characterised the *PROEMIA* of our much-respected predecessor, Dr. HUTCHINSON. If, on the other hand, these Retrospective Essays be intended for reference only, then unquestionably they are not extended enough; nor would the limits of this Journal admit of their being so, were an entire Number to be devoted to each of them. No one, we presume, who was engaged in collecting information on any particular point of medical science, would content himself with the mere outline of which our Retrospect must necessarily consist. To these motives for discontinuing this department in its usual form, we may add another,—the delay which it presents to the publication of Original Communications, and the consequent disappointment to our Correspondents.

But, although we mean not to attempt in future to condense within a few pages the contents of many volumes, yet we purpose to give, at the beginning of each year, a list, or “*Catalogue Raisonné*,” of all the most important Works, Papers, and Cases, published during the one which shall have just elapsed. By this plan, the other departments, with the exception of the *INTELLIGENCE*, will not be encroached upon; the general reader will find the usual matter for his perusal; and those interested in particular subjects will be directed to the best sources of information.—EDITORS.



ORIGINAL COMMUNICATIONS,
SELECT OBSERVATIONS, &c.

ART. I.—*Case of Lithotomy, attended with Hemorrhage.* By JOHN SHAW, Esq. Surgeon to the Middlesex Hospital, &c.

{[With an Engraving.]}

To the Editors of the London Medical and Physical Journal.

GENTLEMEN,—The subject of hemorrhage after the operation of lithotomy is considered of such importance, that I am induced to believe the history of the following case will be acceptable to many of your readers.

JOHN SHAW.

The patient was a stout and fat country man, about sixty years of age. When he came to the hospital, he did not know the nature of his complaint: indeed, so little idea had he that the cause of his symptoms was a stone in the bladder, that, on my proposing to sound him, he left the hospital. He was, however, persuaded to return; and, about ten days after his admission, he submitted to be sounded. As the rub of the stone was sometimes felt only on the entry of the staff through the neck of the bladder, I was led to suspect that it was either a calculus projecting from a bed in the prostate, and which was pushed back into its sac by the convexity of the staff going over it, or that it was so small that it might, perhaps, be passed by the urethra.

Under these circumstances, and as the slight irritation under which the patient suffered was always easily relieved, I did not perform the operation until he had been some time in the hospital, and had been repeatedly sounded.

Operation.—After marking the place of the tuberosities of the ischia, I passed my left forefinger into the rectum, for the purpose of guarding the gut during the first steps of the operation. I commenced my incision an inch above the anus, near the raphé, and carried it obliquely past the anus. The patient being very fat, I at once thrust the scalpel to a considerable depth; so that this incision went through the skin, and at least an inch of fat. After cutting through more of this adipose substance, I withdrew my finger from the rectum, and passed it into the wound, for the purpose of directing the incisions through the levator ani. Then, feeling the staff through the face of the prostate, I cut upon it, and carried my knife forward through the membranous part of the urethra and

prostate, following and directing the point with the forefinger of my left hand. On making this incision, there was a gush of fluid: I thought that it was urine; but, on observing it flowing over the back of my left hand, I saw that it was blood. I, however, proceeded with the operation; and, on the bladder being fairly cut into, there was a second gush of fluid, which was urine. Before introducing the forceps, I enlarged the wound a little, with a common curved bistoury. I now felt a very small stone lying on the tip of my forefinger: this was easily brought away by the common forceps; and, on introducing the finger again, a second stone, of a similar size, was felt, which was as easily extracted. The operation, I am told, did not take up more than three or four minutes.

The blood now flowed so profusely, that I was at first afraid I had wounded the pudic; and I, therefore, immediately put my finger on the place of that artery. I was relieved by finding it beating distinctly and strongly; but, though pressure was made on it by me and my colleagues, the bleeding was not at all commanded. Now, recollecting that the bleeding had taken place immediately on my cutting through the prostate, and considering that the pudic artery was felt distinctly, while pressure on it did not stop the hemorrhage, I hoped that the bleeding, although of an arterial colour, might be principally from the veins of the prostate. The patient was kept on the table for a considerable time, when, the bleeding appearing to subside, he was carried to bed. For the first ten minutes, the lower part of his body was left exposed, and his thighs and perineum were covered with wet towels: but, it being found, on examining the sheet, that he had lost about six ounces of blood, the wound was again examined.

It happened to be a very bright sunshine, and the patient's bed being close by a window having a south-west exposure, it was possible to place him so that the sun shone fairly into the wound, when the lips were held open. The hemorrhage had now so far subsided, that the wound could be sponged clean to such a depth that the place of the trunk of the pudic could be seen: but, as this vessel was distinctly felt beating all along the ramus, and as pressure on it had still no effect on the bleeding, we were satisfied that it was untouched; and the more especially as, by sponging the wound clean, we could *see* the blood oozing apparently from the bladder. But as, from the depth of the parts, it was not possible to apply a ligature with any degree of certainty,* and as there was now only an oozing, a

* On examination after death, the distance from the external wound to the source of the hemorrhage was found to be four and a half inches. See explanation of the Plate.

canula, with lint and sponge wrapped round it, was introduced into the neck of the bladder.

After this there was not any more bleeding, excepting a little through the canula, which soon stopped of itself. It was not thought proper to plug the canula, as the bladder might have been filled.

About four o'clock, the patient became so restless, and begged so much to be allowed to pass his urine, that I suspected the bladder might be filled with coagula, and I therefore removed the canula; but, on putting my finger into the bladder, I found very little blood there. As there was now no hemorrhage, the tube was not again introduced.

The patient presently began to complain very much of pain in his abdomen and chest. Being cold and the pulse low, he got some cordials; after which, he was more composed; but, from seven to nine, he seemed to suffer excruciating pain in his bowels. This increased so much, that he could not lie still: indeed, he got up several times, and was with difficulty restrained from getting out of bed; but it was remarkable that, notwithstanding these struggles, he never fainted: indeed, the loss of blood did not seem to have weakened him. During this time he occasionally took a table-spoonful of brandy, with a little wine and sugar. From nine to ten, he was more composed: after this, he again seemed to suffer excessively from spasm; and he died about half-past eleven.

It may be supposed that the symptoms just detailed are not those consequent on the loss of blood, and that they are more like the symptoms of inflammation of the bowels. It is not easy to explain the cause of the violent pain in the chest and abdomen which follows the loss of blood; but I believe the fact of its frequent occurrence is so well established, that few surgeons would be deceived by it so as to treat a patient under these circumstances for inflammation of the bowels.

On the following morning, the body was injected; and this was done by separate pipes in both common iliac arteries, the two external iliacs being tied. The inferior mesenteric artery was also injected by another pipe. My reason for proceeding in this way, was to insure the injection passing through every vessel that had been wounded. It is well known to all practical anatomists that, when it is attempted to inject the arteries of the pelvis with wax by one pipe put into the aorta, many of the small vessels are not filled. The inferior mesenteric was injected, because (as I had, during the operation, felt a large artery beating in the rectum,) I thought it possible that a branch from it might have been the vessel wounded.

The vessels in the perineum were first examined; and, after it was found that the trunk of the pudic and the artery of the

bulb were entire, the penis, bladder, and rectum were taken out; the muscles and arteries being cut off close from the rami of the ischia.

The first figure in the Plate, which is taken from a drawing made from the parts after I had demonstrated them to the pupils, and had shown them to several of my friends, will sufficiently explain the source of the bleeding.

The original drawing is nearly of the full size; the depth from the external wound to that in the prostate being four inches and a half.

A is the trunk of the Internal Pudic. This artery, in separating the parts from the ramus of the ischium, was necessarily divided at E.

B, is the Artery of the Bulb, raised out of its natural situation, and held up by a thread. This artery was untouched. In this view it necessarily appears separated from the main pudic: but the circumstance of its being completely distended with injection is sufficient proof that it could not have been wounded during the operation.

D, is the Ischiatic, cut off short.

C, is a vessel of considerable magnitude, imperfectly filled with wax as far as the margin of the wound through the prostate.

The dotted lines, F, mark the continuation of the same vessel, passing under the pubes into the body of the penis. This part of the vessel is represented in outline; the wax from C having escaped into the bladder.

By making the examination of the vessels in this way, there is a proof, as far as dissection will afford, that the vessel C was wounded in cutting through the prostate. It may also be assumed, that the several circumstances of there being a gush of blood at the moment the prostate was cut,—that pressure on the main pudic against the ramus of the ischium had no influence over the hemorrhage,—and that the blood was *seen* to ooze from the neck of the bladder, are all evidences that the wound in the vessel C was the source of the hemorrhage.

A distribution of the branches of the pudic, similar to that which occurred in this case, is more frequent than is generally supposed. But I had neglected to observe it until a few years ago; my attention having been at that time particularly directed to the varieties in the branches of the pudic, by the proposal made by M. DUPUYTREN to carry the incision through the prostate in a direction upwards, instead of laterally. There happened to be at that time two bodies in the dissecting-room in Great Windmill-street, in both of which the artery to the penis passed along the prostate. I have always since taken notice of this variety in my public demonstrations. Indeed, after I found that pressure on the main pudic had no effect on the bleeding, I told several of the pupils that I feared there was such a distribution of the vessels in this case.

I have since referred to the splendid work of TIEDMANN, which was lately brought to this country. In the thirtieth Plate, there is a figure representing exactly the same distribution of the arteries to the penis as that found on the examination of my patient. As the work is scarce and very expensive, I have given a copy of the drawing. Tiedmann describes it as representing an unusual distribution of the left dorsal artery of the penis, in a man of thirty-six years of age. He adds, in a note, that he has seen the same on both sides in a man of twenty-eight years of age, and also in a boy. He has likewise seen a similar variety in the arteries passing to the clitoris.

Figura II. Tabula Trigessima.

"Conspicitur decursus insolitus arteriæ dorsalis penis sinistræ e cadavere viri triginta sex annorum.

"4. Os Sacrum. 5. Os Pubis. 13. Intestinum Rectum. 14. Vesica Urinaria. 15. Prostata. 18. Crus dextrum Penis abscissum. 19. Hasta Virilis. 21. Ligamentum Suspensorium Penis. 22. Arteria Aorta. 26. Arteria Iliaca communis sinistra. 29. Arteria Hypogastrica. 32. Arteria Glutea. 33. Arteria Ischiadica. 35. Pars Arteriæ umbilicalis in ligamentum mutata. 36. Arteria vesicalis. 37. Truncus pro arteria pudenda communi et hæmorrhoidali media. 40. Arteria Penis quæ insolito modo infra symphysin ossium pubis ad penem decurrit. 44. Arteria Profunda Penis. 45. Arteria Dorsalis Penis. 48. Arteria Dorsalis Penis dextra.*

"Similem casum observavi in utroque latere viri viginti octo annorum, nec non in puero. Tandemque in cadavere virginis octodecem annorum arteriam clitoridis pari modo decurrentem vidi. Burns (p. 350,) narrat se hunc lusum quater vidisse semper in maribus. Veteriores anatomie cultores Vesalius, Valverdus, Jac. Sylvius, Baubinus, Veslingus, Highmorus, Winslowus, alique hanc dispositionem arteriæ dorsalis penis et clitoridis tanquam normam descripserunt."

I find that WINSLOW has given the description of the artery to the body of the penis in such a way as to lead us to suppose that he did not consider its passing along the prostate, and under the symphysis of the pubes, as being an unusual distribution. (See Winslow, *Traité des Arteres*, § 249, 250, 251.) HALLER also states, that the older anatomists generally describe the pudic as passing along the prostate, and under the symphysis pubis: (see his *Fasciculus iv.*) Mr. BURNS also, in his work on Aneurism, mentions that he has seen a similar distribution in three instances. Dr. BARCLAY has also given us more authorities for this variety. Within these few days, one of my pupils

* This is from the second figure of the thirtieth Plate of "FRIEDERICI TIEDEMANN, *Anatomie et Physiologie in Academia Heidelbergensi Professoris, Tabulæ Arteriarum Corporis Humani.*"

pointed out to me the following passage in the work lately published by Mr. HARRISON, of Dublin, and which I have much satisfaction in quoting.

“In my dissections of the arteries, I have occasionally observed that the pudic artery, on one or both sides, appeared unusually small; and, on more accurate examination in such cases, I have found that the internal iliac had given off a distinct branch, which ran along the side of the bladder and prostate gland, and, passing beneath the arch of the pubes with the dorsal veins, became the dorsal artery of the penis. *Should such a variety exist in one who was to become the subject for the lateral operation of lithotomy, I fear this artery must be wounded;* and, judging from its size and situation in those cases in which I have seen it take this course, I should apprehend very serious consequences from its division. It is not improbable but that some of those alarming and fatal cases of hemorrhage, which have occurred even to the best operators, may have depended on this variety. I may observe, that I have noticed this variety very frequently in children under eight years of age, but as yet I have only met with three instances of it in the adult.”*

The above authorities are sufficient to induce us to consider the artery, from which the hemorrhage took place in my patient, as a source of great danger in the operation of lithotomy. I do not purpose to enter at present into an examination of the most likely mode of avoiding this; but I trust that the history of this case will have the good effect of directing the attention of lithotomists to the question. The following passage from the work of the veteran BOYER, although it may be in some degree consolatory to the surgeon who loses a patient by hemorrhage, is rather an appalling testimony of the difficulties and dangers of the operation of lithotomy.

“L’hémorragie est un des accidens les plus ordinaires de la lithotomie. Cet accident a souvent été mis sur le compte de l’opérateur, ou celui de précédé dont il a fait choix. Mais presque toujours injustement, parceque les arteres du perinée offrent dans leur situation et dans leur direction des variétés telles, que le chirurgien le plus habile n’est jamais absolument certain de les éviter, quelque soit le procédé dont il se serve.”†

* *Surgical Anatomy of the Arteries.* By R. HARRISON, Demonstrator of Anatomy, Dublin. Vol. ii. p. 124.

† *Traité des Maladies Chirurgicales.* Par M. le Baron BOYER. Tome ix. p. 429. —Paris, 1824.

ART. II.—*Observations on various Forms of Croup.*

By W. PRETTY, Esq.

AFTER reading the history of three cases of Croup, in your Number for October, by Dr. GREGORY, which apparently indicated contagious properties, I was led to reflect upon my limited experience in that disease; and I cannot call to my recollection an instance of idiopathic or primary croup, in which I suspected the existence of such properties. I have often (for it is no uncommon occurrence) attended one child, in a family of three, four, or six children, where no restraint upon their intercourse has ever been considered necessary, beyond what is common in general attacks of illness: the same room and the same bed, in many instances, has been occupied by the unhealthy and the healthy children, without the occurrence of disease in any but the one for whom my assistance was desired.

I have at present under my care two young ladies, sisters, just recovering from croup: in both it had been brought on by imprudent exposure to cold. The elder, twelve years old, was sent home from school at Hampstead, under the impression that she was ill with whooping-cough; but I found her labouring under a violent and alarming attack of this complaint, which had existed for three days: it was soon relieved by leeches, venesection, a blister, and calomel, with compound powder of ipecacuanha. The younger was taken ill three weeks after her sister, and was immediately sent home: her symptoms were mild, and I found it unnecessary to resort to bleeding. An emetic and a purgative, followed by repeated doses of calomel and compound powder of ipecacuanha, soon removed the disease. A third sister, and who had always slept with the younger of the two that were taken ill, remained at school unaffected.

I have seen so many solitary cases of croup in families, that I cannot, at present, bring my mind to believe that it is contagious, in that form usually met with in practice, and known by the name of *Cynanche trachealis*. But I have witnessed many severe and fatal cases of croup, after, or rather in conjunction with, simple scarlet fever and malignant sore-throat: and here I have no hesitation in subscribing to the belief of its being contagious, but not as the primary disease. It usually came on after several days' continuance of one or other of the diseases just mentioned, and seemed to owe its production to the extension of inflammation from the fauces to the larynx and trachea in young children; and they were, to the best of my recollection, exclusively the subjects of its violence: it proved generally fatal.

Whilst practising in Kent, about nine years ago, I had an opportunity of seeing a great number of persons ill with an epidemic visitation of scarlet fever and malignant sore-throat. The young and the middle-aged, in the lower classes of society, were very generally affected by it: it was far less prevalent among persons whose circumstances in life gave them the means of guarding against its contagion. The croupy symptoms were confined to young children, adults being free from them; although among the latter some cases were very severe, in which, from sloughing in the throat, deglutition and respiration were performed with difficulty.

I obtained opportunities of examination after death; and in all who died with croup as a symptom, (and I recollect none that died without it,) I found extensive inflammation of the fauces, larynx, and trachea. The adventitious membrane commonly found in fatal cases of *cynanche trachealis* was present in many instances; in others, only a copious exudation of thick mucus; and in some, a positive sloughing of the tonsils, *velum palati*, and *epiglottis*. I well remember one dissection of a child, about five years old, where I found the last-described state of parts, with the addition of ulceration in the interior of the larynx, and a perfect lining of the tracheal tube a considerable way down towards the lungs, formed of coagulable lymph. I might here observe, that the scarlet efflorescence on the skin was wanting in some cases of the disease in adults; and that those who had it not, or but faintly so, generally had the worst throats. The same contagion produced in some the scarlet fever, in others the malignant sore-throat.

In town practice, I have met with two well-marked instances of the absence of the scarlet efflorescence, when every other symptom of illness corresponded with the cases of scarlet fever which I had then under treatment in the same house and family. Here there was no aggravation of inflammation in the throat, and the recoveries were quick and satisfactory. I have never seen croup follow scarlet fever in London; nor do I recollect ever attending a case which proved fatal, where timely assistance was obtained.

I feel disposed to think that common and slightly ulcerated sore-throats are sometimes contagious. I was summoned, early one morning, to a child in a respectable family, who had been ill of sore-throat for several days, or a week: he had not received medical assistance, in consequence of his great aversion to taking medicine. I found him in a sinking state, from a frightful sloughing of the fauces, and he died in the evening of the same day. Subsequently four other children, brothers and sisters of the deceased, were attacked with *cynanche tonsillaris*, but without one unfavourable symptom, and they soon

recovered. I have seen many such instances of apparently contagious properties in this disease.

From the evidence I have adduced in my own experience of croup following scarlet fever and malignant sore-throat, I should think that the cases recorded by Dr. Gregory must have been of a similar nature, particularly as he says that the first child he found very ill with "ulcerated sore-throat." Under such circumstances, I believe him to have been quite correct in supposing the disease he was attending to be contagious.

Perhaps your readers will pardon me if I extend this communication by offering a few observations upon another species of croup, to which young children are subject, and concerning which medical men are a little divided in their opinion. I allude to that peculiar species of convulsive disease named Cerebral Croup, and which is described by the late Dr. CLARK, in his "*Commentaries on the Diseases of Children.*" I was first engaged in endeavouring to understand this complaint, in consequence of two of my own children becoming the subjects of it. One of them, after having been for several weeks affected, at indefinite times, with paroxysms of spasms, accompanied with a croupy inspiration, but apparently otherwise in the possession of health, with the exception of an occasional bowel-complaint, was seized with two slight convulsions in the morning; a third occurred in the afternoon of the same day, and which terminated her existence almost instantly. Upon dissection, the blood-vessels of the brain were found unusually loaded, and effusion had taken place into the ventricles, and between the arachnoid and pia mater. Four intussusceptions of the ilium, without any evidence of local inflammation, were also discovered; but no other appearance of disease. My second child was seized with a convulsion a week after the death of her sister, (they were twins,) which was followed by repeated paroxysms of croupy and impeded respiration, which threatened the production of another general convulsion; symptoms of meningitis supervened, as also those of effusion,—such as the peculiar motion of the arm about the head, frequent startings with screamings, insensibility, squinting and dilated pupil, &c. These very formidable symptoms were removed by leeches to the temples, blistering plasters to the neck and head, with calomel purgatives; but the croupy paroxysms continued for several months, when they ultimately yielded to the exhibition of *mistura assafoetida*, which was prescribed by a medical friend. It appeared here to have been continued by the force of habit, the original cause having been removed long before the spasmodic actions were overcome. The age of these children, when attacked with convulsions, was eight months.

My third child, when seven months old, was taken ill like his

sisters. The nurse who had the care of him neglected to give him proper exercise, and moreover frequently fed him with spoon-food, when he ought to have had the breast. He was occasionally disordered in his bowels, as most children are during infancy; and, for some time prior to his illness, he could never bear that active exercise in the arms which a good nurse will always give to a healthy child, without the respiration and circulation becoming so seriously impeded as to give alarm for his safety to all present. The attack of croup was preceded by a few days of febrile excitement, with cough, and sudden startings without any apparent cause. The treatment consisted of the application of leeches, with the exhibition of aperient and saline medicines. He improved under this plan, but the spasms did not leave him. A few weeks after this illness, he was seized with a convulsion, and the same means were again resorted to, with equal benefit; but, the spasms frequently recurring, I was constantly in fear of a repetition of convulsion. I had the child weaned, and sent him a few miles out of town; where, under the care of a more trust-worthy nurse, he gradually lost the complaint, and is now a fine healthy little fellow.

Not fully understanding the nature of this affection, I took every opportunity that presented of asking my medical friends for their opinion; and I am sorry to say that I was, if possible, more perplexed than before, for I scarcely found any two of them to agree, though several stand deservedly high in their profession, and I much respect them for the possession of superior medical talents. I trust that, without giving offence to any, I may say, that by one it was considered to arise from the cutting of a tooth, the obvious remedy for which was lancing the gums: this was done, but no tooth was cut till two months after the complaint had disappeared. The wet-nurse was also recommended to be changed. By another it was a cerebral affection, and serious in its consequences. A third gave it as his opinion that gastric and intestinal irritation was the cause, without any particular reference to the head. By a fourth it was supposed to depend upon local pressure on the recurrent nerve, or its branches: an external application was recommended, and some alterative medicine prescribed, and the child to be weaned.

About this time the disease had accidentally excited a good deal of attention, and some excellent communications appeared in the different Medical Journals; but concerning its pathology and treatment there seems still to exist a great discrepancy of opinion. Upwards of a dozen cases have been under my care, independent of the experience I have had under my own roof; and in all I have seen such powerful reasons for believing the affection to be produced by cerebral irritation, that I do not

hesitate to give it as my opinion that, in by far the majority of cases, the encephalon was the seat of the complaint; and, although the cutting of a tooth, or the irritation arising from disordered bowels, may occasionally prove the exciting cause, that it mainly depends upon something wrong within the head. In confirmation of my opinion, I would draw the attention of your readers to a paper upon Meningitis, in the "*Medical Repository*," written a few months since by Mr. DAVIES, in which the symptoms there detailed as characteristic of that disease have been more or less present in all acute cases of this species of croup that have come under my observation.

These spasmodic attacks are very generally the precursors of convulsions, unless means are adopted to prevent them, and then children die of meningitis. This fatal course happened to a child in a family where another had previously died of meningitis, and subsequent effusion. A third child in this family had the complaint a year after, and it continued for three or four months, during which time he experienced two seizures of convulsions, and the latter have more than once returned along with the croupy inspiration, when his system has appeared surcharged with blood; and this was very likely to happen, from being too much indulged with food. Bleeding, purgatives, and blisters, with cold lotions to the head, were the means chiefly used for his relief. The spasms continued for several months, gradually losing their violence and frequency; and he is now five years old, and a fine healthy-looking boy. He struggled through a smart attack of continued fever this last spring, which affected his head severely, but produced no return of his former symptoms.

I have also to add, that I lost, in April last, an infant, only three months old, in the same family, which was affected with croupy respiration, repeated convulsions, and every symptom of meningeal inflammation. This infant's alvine discharges had a very unhealthy appearance during its illness, and I have frequently had reason to suspect that such depraved secretions were continual as effects of such seizures. The eldest child, now ten years old, has experienced two attacks of epileptic convulsions within the last two years, and each time was cured chiefly by depletory measures. The parents of this family have indeed been unfortunate with their children: but such afflicting results are not always met with, as I have experienced the pleasure of seeing recovery effected by the same means in more than half the cases that have come under my care.

Reflecting, as I have often done, upon these and similar cases, I cannot avoid indulging a certain degree of belief that their production is very often intimately connected with hereditary

conformation : in proof of which opinion I can say, that the mother of the family just instanced as suffering so much from this complaint, is, without exception, one of the most timid and nervous females I ever knew, and is almost daily complaining of headache.

I will also mention, that the father of a child which has recovered from two attacks with convulsions, and of another which died suddenly in a convulsion, always exhibited a certain weakness of his mental powers, and is now unhappily bereft of his reason : he is in a state of childishness. More evidence of the same kind I could adduce, but, to my mind, the fact is quite obvious.

The object I have had in view in relating these cases, is to show that, however necessary it may be to attend to the state of the bowels in this disease, as well as the state of the gums during the period of dentition, it is much more so to attend to that of the brain and nervous system, which will generally require the loss of blood before recovery can be effected.

I will close this communication by an answer to an observation I have heard, that young children cannot lose blood with impunity. Now, this must very much depend upon the extent to which the evacuation is carried. It has twice occurred to me to consider it necessary to recommend the application of leeches to infants within forty hours after their birth : one in consequence of pressure sustained during parturition, producing convulsions, which would not yield to every other means that could be thought of ; and a second time where the same cause, in a breech presentation, produced a state of apparent asphyxia, which artificial respiration and the warm bath imperfectly removed, but which was for twenty hours followed by impaired sensibility, impeded respiration, screaming, and starting of the fingers from spasmodic action of the extensor muscles, and a disinclination to suck. Both infants were most satisfactorily relieved by the bleeding.

Mabledon-place ; Nov. 8th, 1825.

ART. III.—*Cases intended to illustrate the Contagious Nature of some Forms of Croup.* By JAMES SYM, Esq. (Communicated by Dr. G. GREGORY.)

EARLY in the spring of 1824, ulcerated sore-throat, accompanied in some instances by scarlatina, became prevalent in this neighbourhood. In general it did not prove fatal ; but a number of cases became complicated with croup, and of such cases I only met with one which terminated favourably. The disease

seemed to be contagious among children ; and I was even called to an old man, an Elder in the church, who died of a similar affection. He had been very obliging in visiting the sick, for religious purposes ; and he had spent a considerable time in an apartment, in which an infant was dying of this disease. Two days after the death of the infant, he was seized with sore-throat ; and when I saw him, on the third day of his illness and twenty-four hours before his death, his fauces were much ulcerated, and he laboured under the most torturing dyspnœa I have almost ever witnessed. He had dreadful approaches towards suffocation, which seemed to be kept off for a season by the expectoration of large quantities of mucus during his struggles.

This was the only instance of an adult being affected with the disease that fell under my observation ; and it seemed to differ from the affection in children in this respect only, that the secretion from the tracheal membrane consisted of viscid mucus, instead of coagulating lymph.

In the infants, the symptoms of croup were most decided ; the affection of the fauces being in many cases so trifling, that it had not been attended to by their mothers, until I detected the ulcers, upon examination, after the accession of croup had commenced. In one family, consisting of three children, who were successively attacked by the disease, two died and one recovered ; the only cure of the complicated affection that occurred in my practice. Having examined the windpipe of one of these children after death, I found it filled with a thick, firm, lymphatic tube, which extended into the bronchial ramifications. In the case which terminated favourably, the ulcers were getting better when the croup commenced ; and to this circumstance I attribute the efficacy of the remedies in operating a cure.

From what I observed, I concluded that the ulcerated sore-throat, which appeared to be closely allied to scarlatina, constituted the contagious part of the disease ; and that the croup was occasioned by an extension of the inflammation at the margin of the ulcers into the rima glottidis, and from thence along the mucous membrane of the trachea. This idea seems to derive confirmation from your cases ; and, if further supported by the observation of other practitioners, it may account for the contagious character of a certain species of croup.

Kilmarnock, Ayrshire ; 14th Oct. 1825.

ART. IV.—*Case of peculiar Nervous Excitement.* By J. VALE
ASBURY, Esq. Enfield.

ON perusing a late Number of the London Medical and Physical Journal, two “cases of hydrophobia, not arising from the bite of a rabid animal, by — WHYMPER, M.D. surgeon-major 2d regiment of Guards,” attracted particular attention, and forcibly called to my recollection the following case, which I extract from notes taken on visiting the patient. I present it without comment, and leave the medical world to make such inductions as the occurrence of similar cases may ultimately offer.

June 23d, 1822.—Smith, a labourer, ætat. twenty-three, of small stature, general health good, (had been employed in the hay-fields during a fortnight of very hot weather,) was taken in a fit at the time a barber was cutting his hair. It began by tremors, anxiety, a sense of weight and oppression at the chest, with apparent suffocation and difficulty of swallowing; the countenance exhibiting general symptoms of alarm, and the whole body much agitated. In about three-quarters of an hour, these symptoms left him spontaneously; he became tranquil in body and mind, and then complained only of slight pain in the head, with general debility. The tongue white; pulse sixty-five, small and soft.—Ordered four grains of calomel, with a strong cathartic.

24th.—He had no return of the symptoms, but complained of giddiness and pain in the head. Did not see him this day.

25th.—Let blood, to eight ounces: the pulse previously about sixty, and contracted; after bleeding, it was somewhat more expanded. He walked two miles afterward; and, when at home, the arm bled again, and he was speedily taken in another fit, which presented the character above stated, but with greater sense of suffocation and difficulty in swallowing. The idea of being compelled to swallow any liquid produced great agony. The paroxysms continued from three to five minutes, and then the system became tranquil for about the same period of time. These paroxysms, with their intervals of collapse, continued an hour,—from four to five o'clock of this day. I saw him about half after five, and remained in his room three-quarters of an hour: at this time he had no pain any where, but complained of slight giddiness in the head, and a weight above the sternum, with general languor; in other respects, he called himself well. He swallowed an antispasmodic draught, in divided portions, tolerably well; but the last portion occasioned choking, which soon went off again, without any further inconvenience; and he had no return of fits till twelve o'clock at night. During this time he appeared watchful, restless, and

had a peculiar degree of anxiety depicted in his countenance. From twelve to one o'clock at night, the fits continued in the form stated from four to five of this day; when they again left him, and he became tranquil, and had some sleep.

26th.—He ate some light food, and drank freely. He complained of great weakness, and appeared restless as well as watchful. About four o'clock, he lost his speech for upwards of an hour. The evening of this day he complained of hunger, and ate a mutton-chop. He had some sleep in the night, but was generally restless.

27th.—In the morning, great restlessness and watching; in the evening, frequent fits of laughter, and from eleven o'clock continued laughing violently for three-quarters of an hour.

28th.—He was removed to the Middlesex Hospital, and there he immediately fell into a state of stupor, which continued for some days. By the employment of purgative medicines he recovered, excepting from debility, and left the hospital.

He continues to follow his employment as a labourer, and has had no return of his disorder. Purgatives, with antispasmodics, formed the general plan of treatment, previously to his admission into the hospital.

ART. V.—*A Case of severe and protracted Headache, terminating in Tic Douloureux, successfully treated.* By A. B. GRANVILLE, M.D. F.R.S. Physician in Ordinary to His Royal Highness the Duke of Clarence, &c. &c.

IT has been stated that tic douloureux, especially of the face, more frequently arises from impaired digestion, than from any local affection, easily detected; and I am inclined to subscribe to a doctrine which seems the offspring of experience, and which daily practice tends to corroborate. But, before the derangement of the digestive functions give origin to such a complaint, it will be observed that many and various other symptomatic ailments of the constitution prevail, equally the effect of that derangement, and the precursors of TIC. Not a few of the patients who have suffered from this formidable disorder, and some among whom have perished in consequence of it, might, in all probability, have averted its attacks, had they attended more to the less important disorders under which they laboured for some time before the painful affection of the nerves made its appearance, and directed their whole energy to correct that state of indigestion which gave rise to those disorders. Among these I reckon, as one most deserving of notice, intense and obstinate headache following, or preceding, but invariably accompanying, certain indispositions called *bilious*.

This symptom of deranged action in the stomach, liver, or bowels, (than which there is, perhaps, none of greater importance,) appears, in many instances, to be nothing else than the first stage of *tic douloureux* of some part of the head or face; and I feel warranted in stating further, that a *tic*, or painful affection of the nerves, *external* to the bones of the cranium, will be found, mostly, to follow those acute and intense headaches, arising from indigestion, which, in their progress, have caused affections of some part of the *internal* structure of the head, that have afterwards yielded to an appropriate and vigorous treatment.

My experience in complaints of the stomach during the last ten years, has furnished me with more than one example to illustrate the above practical position; but the object of my present communication being merely to call the attention of the profession to the parental connexion that exists between headache and *tic douloureux*, and not to enumerate the result of private and public practice, for the sake of numbers,—I deem it proper to confine myself to the narrative of one case only of severe and protracted headache, terminating in the latter disease. It has been my study to give the details of this narrative from written notes taken in the course of this complaint, in order to render it as much as possible practically useful.

A young lady, aged eighteen, moving in the first circles of society, and consequently leading what is called a fashionable life, tall, well made, and free from every (even the most distant) constitutional blemish, either transmitted or acquired; possessing a superior mind, and the most amiable disposition; was placed under my care on the 28th of October, 1824, in consequence of severe headache, which had come on almost immediately after leaving London, at the termination of a very busy season, during which she had largely partaken in the bustling recreations proper for her age. This headache was at first disregarded by the patient, who had seldom or never been heard to complain of illness; but the visible effects of its frequent returns on the expression of her countenance, and other appearances, led to an inquiry, the result of which was a determination on the part of the mother to consult me. I had had the honour of attending, the year before, in conjunction with Sir Henry Hallford, a younger sister of the patient, who had also been labouring for some time under a very distressing headache, arising from indigestion; but who, through the care and assiduity of that eminent physician, more than from any feeble effort of mine, had completely recovered. This fact, coupled with another much more important,—namely, the almost sudden death of another daughter a few years before (as I understood), consequent on some affection of the head,—tended

naturally to make the parents not less anxious than watchful; and, therefore, no time was lost to obtain medical advice in the present instance.

When I first saw the patient, her countenance was pallid; the skin somewhat tinged with yellow; the pulse natural; the tongue clean; the spirits were good; the nights undisturbed; menstruation went on regularly; and the bowels *were reported* to act properly. There was evidently a degree of languor present, with an indication on the brows of inward suffering, which contrasted singularly with the flow of hilarity that prevailed in her; but I afterwards learned, in the progress of my attendance, to attach a right degree of importance to the latter circumstance, when I found that it was the result of moral fortitude, and not the natural consequence of absence from pain. On being closely examined respecting the nature of the headache from which she suffered, it was stated to consist in sharp shooting pains, occupying, for a short space of time, the left lateral and anterior portion of the head, darting in and away, and occurring at very irregular periods during the day, but never missing any day. Her appetite had, all along, been tolerably good.

Guided by experience in the case of her younger sister, and by what I knew of other instances of a similar kind, I was led to doubt the accuracy of that part of the report which referred to the proper condition of the bowels; and I, therefore, prescribed such medicines as would enable me to ascertain the nature of the evacuations. This I had an opportunity of doing on the following day, when I observed that the *fæces* were large, figured, spiral, of a dark olive-green, exceedingly compact, shining, and offensive. On inquiry from the female attendant, who narrowly watched the health of the young lady, I learned that such had been the appearances for many months. Who will deny that we had here the key to the whole secret of the headache?

I forthwith regulated her diet, forbade the use of animal food, oftener than three days in the week, and recommended a mixture of pulpy and farinaceous vegetables, dressed in a variety of ways, as a substitute for the other days' fare. The whole quantity of food, also, to be taken in the course of the day was reduced by one-half. An aperient pill without mercury, and a purgative draught, were ordered. At this period of the complaint, there were none of the usual organic symptoms of disturbed action of the liver, such as pain or soreness under the ribs, or between the shoulders; and pressure produced no uneasiness at the pit of the stomach. The third day passed altogether without the slightest headache; the patient expressed herself much pleased with an evident improvement in her feel-

ings, and said she was much better for the diminished quantity of food she had taken. She had, however, had only one motion, and that, too, of the same colour as that of the day before, hard, spiral, and knotted. The purgatives were made stronger; the effects of which were, proportionately, more satisfactory, although the appearance of the secretions was not improved. The headache, however, had not again returned. Being anxious to go back into the country, I allowed her to leave London, on condition of her attending strictly to diet and the use of purgative medicines.

On the 20th of November, she again came up to town, to report progress. Her countenance was astonishingly improved. She was greatly pleased with the regularity of her diet, and the pleasant feelings consequent upon it. Her bowels had acted regularly twice, and even three times every day; and she had not experienced the slightest degree of headache. She had once been at a ball in the country, where she had danced a great deal, without experiencing any inconvenience. I substituted a milder purgative for the stronger pills, and recommended perseverance in the reduced diet.

On the following week, I found her countenance very yellow, the bowels sluggish, her pulse quick; but free from headache, and still in high spirits. One circumstance, however, attracted my attention, and that was the exquisite soreness of that portion of the scalp which covers the right fronto-parietal region, so that she could not bear to touch it, and felt as if the hair was pulled tightly backwards. I changed the purgative medicines, which gave rise to an immediate improvement, from a more brisk action on the intestines being produced by them.

Another fortnight elapsed without any headache; the soreness of the scalp only continuing. The patient again indulged in her favourite amusement, dancing, without any headache ensuing.

About the middle of the first week in December,—the complexion having in the mean while improved, the bowels acting pretty regularly, and the head continuing free from pain,—the purgative medicines were gradually discontinued. During the whole of this period, the greatest attention was paid to diet and regimen. In a few days, however, the bowels again became costive: one evacuation only occurred in the day; and this change in the secretions was followed by a return of shooting pains in the head, and an increase of soreness in the scalp, with a discoloration of the countenance. She, therefore, returned to the use of stronger purgatives, which soon brought an alleviation of the symptoms. The secretions appeared very unfavourable, and plainly denoted considerable derangement of the digestive organs. The patient was, at this time, observed to be restless and agitated in her sleep; and the headache invariably

assailed her on waking, though it would, occasionally, disappear in the course of the morning, again to return once or twice, for two or three hours at a time. Satisfied, by a fresh inquiry into the symptoms, that we had only a case of *sympathetic cephalalgia* to deal with at present, I contented myself with persevering in my original views and treatment, which failed not to produce, in due time, a proportionate gradual amendment; so that, under the date of the 23d of December, I find in my note-book the following memorandum:—"Miss ——— looks much better. She has had occasional shooting pains in the head, which have got well by riding on horseback, or disappeared shortly on taking a nervous draught. The pain on these occasions is *said to be different* from that under which she laboured before. The state of the bowels is greatly improved; they act freely, and twice a-day. Pulse full and quick; she menstruates regularly."

About this period she left town; and I did not again see her until the 9th of January, when I found her labouring under much more alarming symptoms than I had seen her to suffer from before; symptoms which seemed to be the precursors of a serious and complicated disorder, as will be seen from the sequel of the present narrative.

It appeared, on inquiry, that, being free from all pain, and feeling quite well, our patient had somewhat relaxed in her attention to diet and rules for exercise, and had indulged in the favourite amusement of waltzing, at a ball given at Bushy Palace. The immediate effect of this was giddiness, and sickness at the stomach on the succeeding days, which induced her relations to bring her to town. On my visiting her, I found her labouring under excruciating headache; and vomiting, with violent efforts, large quantities of bile. The tongue was foul; the bowels costive; pulse soft, and eighty-four. Having, in the course of my attendance, ascertained beyond a doubt, on more than one occasion, that calomel in particular, and even the blue pill, however indicated by the present symptoms, acted on her constitution most injuriously, by producing febrile excitement, dejection of spirits, acute pain at the pit of the stomach, and an increase of headache, I was debarred from the assistance of those powerful auxiliaries in combatting what I considered a severe bilious attack: I therefore confined myself to the employment of extract of colocynth, rhubarb, and neutral salts. These, however, produced so trifling a relief, that, on the following day, I was driven to a fresh, though cautious, trial of the last-mentioned mercurial preparation; from which some considerable good effects were obtained, as far as relates to the condition of the bowels, yet not without great disturbance of the nervous system. The secretions were highly offensive, and of

a bad character, at first, but they improved somewhat in a few days; and, with that improvement, the headache diminished.

A short time after this, a change took place in the manner of the attack. After a restless night, during the first part of which the pain in the head would gradually subside, perspiration came on towards morning, and sleep followed, which continued till nine or ten o'clock. She would then awake, free from headache, and remain so until she began to exert herself in getting up and dressing; when the pain in the head suddenly came on, preceded by chilliness, and attended with a sensation of weight. This continued, and indeed kept increasing; until dinner-time, when it generally left the patient for an hour or two, again to re-appear for the evening. While the pain in the head subsisted, every noise, and even strong light, affected the patient, and made her worse. The coming on and going off of the pain was invariably sudden, but there was no beating in the affected part. The pulse was, on all these occasions, deep, slow, somewhat full, and irregular, and with a rhythm which musicians call *stentato*. The soreness of the scalp over that part of the head which was affected with pain, was not so great as when it had existed without the headache. The bowels, notwithstanding the purgative system and attention to diet, had again got into an unsatisfactory state. The evacuations were in the highest degree improper and offensive; and, on the morning of the 14th of January, bilious vomitings came on again; so that, had there been any febrile indication, with all the other symptoms present, one would have taken this to be either a continued or a bilious remittent fever.

About this time, the obstinacy of the complaint, and particularly of that one symptom, headache, which had accompanied the fatal disorder in the patient's sister a few years before, began to alarm her parents. The assurance given them that the affection in the head was dependent on that of the stomach, began to fail in tranquillising their fears, inasmuch as the same assurance had precisely been given in the case of the daughter they had lost, up to the very last hour of its formidable career. It was evident, moreover, that, although symptomatic, the complaint in the head threatened to assume a character of local derangement; and that fulness was obtaining in the vessels, which mere purging and diet appeared not wholly to prevent. Bleeding from the arm was therefore proposed, and carried into effect. A very sensible general practitioner, Mr. Sheldon, who had been for years in attendance on the family, bled the patient on the evening of the 14th, in my presence; when the blood flowed freely, but thick and black, and of a remarkably high temperature. The pulse rose immediately after the operation, and the pain in the head was much diminished before morning.

At the end of the second day after the operation, the headache had wholly disappeared. The bowels acted under less powerful medicines, which circumstance induced me to suspend the use of the bluepill, and to recommend, occasionally, a nervous draught.

This amendment subsisted, without any remarkable deviation, for seven days; during which period I observed that her pulse continued much fuller than it was previous to the bleeding, yet not more frequent; that, whenever she took a stronger dose of medicine, pain in the head came on after the third and fourth motion, for an hour or two; and, lastly, that she now and then would complain of chilliness, particularly in the back and along the spine, from the occiput down to the loins. During the whole of this period, the nights were particularly good, the complexion of the patient improved, and there did not appear any visible diminution of either flesh or strength. The spirits continued excellent.

Notwithstanding all this improvement and apparent recovery, I could not be prevailed upon to relax in my orders as to the diet of the patient; but, some indulgence in that respect having been allowed, from a mistaken direction, a repetition of all the worst symptoms took place almost abruptly. I had left the patient on the 20th in the very best state; and, on my visit the following day, I found her labouring under all the symptoms which had first appeared on the 9th instant; such as sickness, headache, quick pulse, pain at the pit of the stomach, foul tongue, thirst, languor, great depression of spirits, with (now for the first time) exquisite soreness throughout the region of the liver. It was, indeed, remarkable that the latter symptoms had never been present before, although I had directed my attention to, and felt the part frequently, for the purpose of ascertaining if any mischief existed there.

This case had now become so discouraging, from the length of time it had lasted, and the little impression the medicines had made on the disease: and I felt so much the high responsibility of dealing with it single-handed, where the eyes of many anxious relatives and connexions were fixed upon me, all dreading the worse consequences, that I forthwith proposed to the mother a consultation; when she selected Dr. Maton for that purpose. In the mean while, following up what I considered a just indication, and once more declaring my opinion to be that the disease would ultimately prove to be wholly dependent on the defective condition of the digestive organs, I administered an emetic of twenty grains of ipecacuanha, which cleared the stomach effectually, and at the same time acted on the bowels. Were the quantity of bilious secretion thrown out on this occasion to be stated, it might appear incredible. Towards the evening of the same day, every unpleasant symptom had

subsided; and, on the following day, the patient was so much better, that the parents spontaneously proposed a postponement of the consultation. About this time menstruation came on, and flowed regularly, although its proper period had elapsed by fifteen days. Towards the conclusion of this operation, headache occurred again, followed by vomiting. The pulse was now ninety-two: I had never felt it so high before. There were alternate paroxysms of heat and cold. No motion from the bowels, and the urine highly coloured.

On the 24th, Dr. Maton was kind enough to meet me in consultation. He inquired minutely into the history and every particular circumstance of the case, and agreed with me that to the state of the stomach we were to look for an explanation of that complicated series of symptoms which made the young lady's malady peculiarly interesting. It was agreed to have again recourse to effectual purgation, and a rigid diet. A pill of rhubarb and extract of hyoscyamus, which had generally agreed, and produced comfortable sleep at night, was continued; and, in addition, a draught was ordered, consisting of aquæ anethi f. ʒjss. ; magnes. sulph. ʒij. ; and magnes. carb. gr. x. bis in die. No meat or fish was allowed. On the following day, after a copious evacuation of fœtid and bilious fæces, considerable amelioration of all the symptoms took place. I persevered in this plan, with the same good effects, for three days after the consultation; increasing, rather, the strength of the aperient pills, and forbidding all but liquid food.

On the 29th, the following memorandum appears in my notebook:—"Miss —— has had a relapse. Awoke at four o'clock A.M. with sickness at the stomach, and a bitter taste in the mouth. Had four bilious evacuations. The urine is highly turbid and sedimentous; pulse slow, rather full. Complexion deeply yellow. Much headache, and shooting pains from the forehead to the occiput. The purgatives to be continued; no food whatever to be allowed. In the evening, she was again much better, and in high spirits; slept well the succeeding night, and awoke next morning refreshed, and with very little headache."

This amendment continued until the 3d of February, when, for the first time, she experienced a pain in the left side of the face, neck, and the external parts of the eye, which, being attributed to a draught of air, was considered as rheumatic; and bags of hot chamomile flowers were ordered by Dr. Maton to be applied to it.

On the 4th, I found the patient with the rheumatic pain much increased, although the application recommended by Dr. Maton had, in the first instance, produced alleviation. The whole of the left side of the body, from the temple downwards, was

highly painful and sore to the touch. There came away from the stomach a quantity of clear water, having a saltish taste. The bowels were regular, but the pulse irregular and slow; no headache. I prescribed as follows:—*Pilulæ saponis cum opio*, gr. v.; *pulveris Jacobi veri*, gr. iij. statim; and *Mæ. camph. f. 3j. aquæ ammon. acetatis*, f. 3ss. *Haustus horâ, pot pilulas, sumendus et quintis horis repetendus.* The patient was desired to remain in bed, with a view to encourage perspiration. In the evening, I found her free from pain, (having slept several hours,) and in a profuse perspiration. The sickness had ceased, but considerable swelling of the parts before affected had supervened.

I have been thus minute in detailing the course of this singular complaint, in order to show the slow gradations by which it passed from costiveness to indigestion,—from indigestion to headache,—from headache to rheumatic affection of the muscles of the head, face, and neck,—and from this to a more intense pain in the head, accompanied by weight, *tinnitus aurium*, deafness, shootings in the left eye, with a constant flow of tears from it, a full pulse, impossibility of laying the head on the pillow, or to leave the bed, and total inability to bear light; all which latter aggregate symptoms had made their appearance insidiously, creeping on slowly, on the subsiding of the rheumatic pain in the face, at the time of the last report.

The case was now reduced to its most distressing limits; and, certainly, no cautious practitioner would have presumed to decide, under such accumulated circumstances, that the still subsisting symptoms of bilious derangement were the positive cause of the increased pain in the head, rather than the effect of it. I determined, therefore, to be on my guard against both; and, in one of the intervals which elapsed between the consultations, when symptoms of an alarming nature occurred with regard to the head, which could not be accounted for by any irregularity of the stomach or bowels, I directed blood to be taken from the left temple and from behind the left ear, by cupping-glasses. This operation I had occasion to direct Mr. Mappleson to perform twice, at different times, to the extent of twelve ounces; and at each time immediate relief followed. The consulting physician approved of this course, and, in conjunction with myself, ordered, on another occasion, when severe *sincipital* and *temporal* headache, accompanied with heaviness and soreness of the scalp prevailed, to apply twenty leeches; and, a few days afterwards, a seton to be passed through the nape of the neck. The neutral salts, particularly the sulphate of potass, were continued. The diet at this period was watery. By this plan of treatment we felt confident we had saved the patient from much serious mischief.

In this manner we proceeded for some time, when the complaint, again changing character, appeared to quit the head, and direct, once more, its whole strength to the stomach and to the region of the liver, which latter became highly painful. Having tried for the twentieth time, with no less injurious effects to the nerves, the pilula hydrargyri, and even the oxymuriate of mercury, we resolved on rubbing in the mercurial ointment on the region of the liver. This was done for ten or twelve days very freely, but no sensible effect was produced on the mucous membranes. The constitution seemed unsusceptible of the ordinary action of mercury; while, on the other hand, it became greatly disturbed,—alarmingly so, indeed, whichever preparation of that medicine was employed. One advantage, however, we derived from this course,—namely, the removal of the enlargement and pain in the region of the liver. But, on these symptoms disappearing, the headache again returned, and with greater violence than ever; the stomach and bowels becoming once more deranged at the same time, and to a greater degree than before. We now suspended the external use of mercury altogether, and carried off by other means prodigious quantities of black and green bile by stools; three or four of which were obtained every day.

To go on detailing these alternated attacks, and remissions of headache and disorder in the stomach, through the whole period of their occurrence, which lasted until the middle of April, would seem tedious, although the details might be deemed interesting to a practitioner placed in a similar situation with ourselves; when any encouragement to be derived from the knowledge of a similar case, its treatment, and successful termination, would have been hailed by us with satisfaction. Our situation, indeed, was one of the greatest anxiety, and we could not behold the slow sinking of our patient, her emaciation, constant sufferings, total depression of strength and spirits, and an almost uninterrupted febrile condition of the constitution, lasting for upwards of six months, to which was now superadded an unpleasant cough, without feelings of alarm. We had succeeded, indeed, in tracing the connexion of the cephalic symptoms with those affecting the digestion;—we had effectually checked, by active and prompt measures, that period of danger arising from a temporary fulness of the vessels of the head, which had, at one time, placed the life of the patient in jeopardy;—we had ascertained that the head-aches were under the control of purgative and alterative medicines; although we found out, at the same time, that what should have been our most powerful auxiliaries in this class, the mercurial preparations, acted mischievously on the system, and were consequently inadmissible. But we had, on the other hand, before us an exte-

nuated patient, with a constitution broken down by unwearied sufferings, watchfulness, low diet, and fever; and still the call for purgatives and other lowering medicines continued imperative, for bad secretions still flowed, and the headache ceased not.

It was at this conjuncture that, watching by her side one day, when the patient laboured under what she called an agonising pain in the head, I endeavoured to procure from her a clearer account of her sufferings than she had lately been able to give us. She began by stating that the pain in the head, for the last five weeks, had been very different from that which she had experienced during the first five months of her complaint; that it was now, as it were, under her hair,—arose in the back of her neck,—travelled over the head, confining its course chiefly to the left side of it,—descended over the eyebrow, passed through the eye, which became painful to a degree, and shed tears,—penetrated the upper jaw,—made all the teeth of that side highly painful,—and, lastly, reached the long muscles of the neck. Thus spread, and occasionally involving the left ear, the pain would last for half an hour, and then gradually disappear, leaving a sensation of coldness and a tired feel in the parts. During the paroxysm, the whole extent of the affected side was so exquisitely tender, that the slightest touch could not be borne,—the eye could not be opened,—the face could not be laid on the pillow, and the slightest noise would increase her sufferings. In the course of this clear narrative, two exacerbations, and one intermission or remission of pain, occurred. I felt the pulse then: it appeared not to be affected in any way by what was taking place in the head. As these were the symptoms that had prevailed for the last five weeks, more or less, it struck me that the disease might now be considered as reduced to its simplest elements, and as having become a *tic douloureux*. I hastened, therefore, to communicate my observations to Dr. Maton at the next consultation, and proposed to try the use of the carbonate of iron, in scruple doses three times a-day, a rhubarb pill at night, and an enema to open the bowels in the morning.

This plan having been acceded to, and carried into execution, we were not long in witnessing its good effects. There was a cessation of the pain in a few hours, and in two days more the patient was able to leave her bed with assistance, and walk, for the first time, out of her bed-room, bearing a strong light without much discomfort. After a few days more, the dose of the carbonate of iron was increased to half-a-drachm three times a-day, with a corresponding increase of benefit; so that three or four days would elapse without any pain. The bowels were all along kept freely open by rhubarb only, and the enema. Three, and frequently four, motions were thus obtained daily;

which were, of course, deeply tinged by the iron, and very offensive. The medicine never appeared to raise the pulse, although it was in due course increased to one drachm three times a-day; from which time until the 14th of May, 1825, (a period of three weeks,) that quantity of carbonate of iron was continued as before directed, and no attack of tic occurred except once, when the bowels had not acted for two days.

The period of convalescence, after the cessation of the spasmodic pain in the head and face, was short, and the recovery so rapid as to astonish every one. The patient, as soon as she was able, was sent out of town; and is now, and has been for some months, not only free from all disease, with her digestive powers perfectly restored, but better, even, than she had been for many years before.

The length to which this narrative has extended, precludes the possibility of any remarks on the singular events it embraces, were I even inclined to indulge in them. I have been taught by them more than one lesson in practice, by which I hope to profit; and I trust that the perusal of it may prove equally instructive to others. It is gratifying for the medical attendants in this case to think that, in the management of its various difficulties, they have found practical applications,—a dispassionate examination of symptoms, unbiassed by theories or systems,—a cordial co-operation,—and the benefit of previous experience, to be by far the best resources on which to rely for the discharge of their duties towards their patient.

Grafton-street; 10th December, 1825.

ART. VI.—*Case of Small-Pox after Small-Pox from Inoculation.*

By THOMAS RICHARDS, Esq.

As the following case may be deemed somewhat interesting,—especially as there have been recently some animated discussions on the subject to which it refers, in the Royal Academy of Medicine at Paris,—I am induced to place it before the public, through the medium of your Journal.

On Sunday, October 30th, my friend, Mr. Adams, of Charlotte-street, was called to see Mrs. M., aged twenty-two, and residing at No. 6, Pitt-street, Fitzroy-square. He found her labouring under a considerable degree of fever, with a pustular eruption on her face, head, arms, and other parts of her body, in every respect resembling that of small-pox. Upon inquiry, however, it appeared that, about fifteen years ago, she was inoculated at Milverton, in Somersetshire, with variolous matter; the cicatrix of which is still visible on the left arm. From this inoculation she had the small-pox; and a letter, sub-

sequently received from her father, corroborates most circumstantially this statement, as he decidedly affirms that she has had, not only the small-pox, but the chicken-pox, and every other infectious disease usually incident to youth. From the patient's statement, and from the appearance of the disease, we were induced to pay a very close attention to the case; the particulars of which are now submitted to the profession.

The eruption made its appearance on Saturday, the day before Mr. Adams saw the patient. For some time previous to its appearance, Mrs. M. had been indisposed, and her indisposition increased till Friday the 28th of October, bearing all the symptoms of acute fever. On Friday, it had arrived at a sort of crisis; and on Saturday the eruption burst out, accompanied by a mitigation of the more violent febrile symptoms, although there was still a good deal of excitement remaining. On Sunday, the face, arms, head, chest, and other parts of the body, were covered with pustules, and the tongue and eyes were affected with the eruption. On Monday, some of the pustules had put on the appearance of maturation, while others retained their pristine character; and others, again, began to fade, without any purulent formation. On Tuesday, the same appearances presented themselves; the febrile symptoms having considerably abated, and the patient complaining of the lassitude which usually accompanies "the term" of the disorder. For the next four days, the pustules continued to die away; and, by the Monday following, (the ninth day from the appearance of the eruption,) the pustules had entirely disappeared, leaving only that discoloration of the skin which marked their situation. It is needless to add, that the patient did well, as she began to mend as soon as the eruption appeared, and continued to do so till it had completely vanished.

When we ascertained that Mrs. M. had had the small-pox before, our first opinion was, that her present malady might be an aggravated case of varicella; but the unequivocal character of the pustules, and the extreme degree of fever with which they had been ushered in, together with the present state of the patient's sufferings, induced us to abandon this, and to decide that it was a case of small-pox, modified and materially influenced by previous inoculation.* In this we were strengthened

* In a discussion on the subject of the varioloid epidemic now raging at Paris, M. HUSSON said, in the Royal Academy of Medicine in that city, that one day M. LEROY brought a list of twenty vaccinated persons, whom he declared to be labouring under small-pox. He (M. Husson) visited them all, and satisfied himself *that there was not a single case of true small-pox among them.*—Quære; Were not these cases of a modified and altered disease?

I remember a case after vaccination, similar to that which I have detailed, occurring about seven or eight years ago in the same neighbourhood; an account of which was, I believe, published in one of the Journals at the time.

by the concurring opinion of two other gentlemen of considerable experience in practice, who visited and examined the patient. To render this opinion still more valid, we discovered that a child *in the next house* was at that time recovering from the true and natural small-pox; which child I myself saw, a day or two after Mr. Adams had been called in to Mrs. M.

Charlotte-street, Fitzroy-square; Nov. 20th, 1825.

ART. VII.—*Observations on the Ergot of Rye.* By — CLARK, Esq.
Surgeon, Bristol.

ON looking over the continental Journals a few years since, my attention was frequently arrested by the effects described as resulting from the *Secale cornutum*, and I anticipated the value which such a remedy would prove to our Pharmacopœia. Not having any opportunity myself of making a trial of its efficacy, I trusted to the accounts of those whose testimony, from their experience and advantages, I considered as satisfactory. Their report, however, was very unfavourable, and I had nearly given up the idea of the drug proving any acquisition, till, through the medium of this Journal, such cases were brought before the public as could not but attract considerable attention, and claim the patient investigation of every reader: I allude more particularly to the interesting details of Dr. H. DAVIES. I feel pleasure in adding, that I am now enabled in some measure to corroborate his statements, by the result of the following cases.

CASE I.—Mrs. S—, a strong athletic woman, thirty-eight years of age, (third labour,) was delivered of a fine child about eight o'clock A.M. half an hour before I reached her residence. The attendants were anxiously waiting the removal of the after-birth. On examining the abdomen, it was found very hard and tumid, and by attention I thought I could discover the situation of a second infant. No presentation, however, could be ascertained by an examination per vaginam. The woman, though in good spirits, and free from fatigue, had no pains till noon, and those very slight; but, during their continuance, I was enabled to ascertain that the head of another child presented. No alteration occurred till four P.M.; the woman still very easy. The pelvis being very capacious, the external parts freely dilated by the passage of the first infant, and nothing but some slight pains wanting to complete the labour, I ordered a scruple of the *secale cornutum* in tea. Precisely twelve minutes after its exhibition, the woman was seized with a pain, which, though not very violent, continued from three to five minutes, and caused the child to descend into the pelvis, so that I could clearly ascertain the whole extent of the head and direction of the sutures. This was succeeded by others; and they continued, with some little intermission, for nearly two hours, when the second

child was expelled; and, in less than fifteen minutes, was followed by two placentæ. The mother and children did exceedingly well.

CASE II.—Mrs. C—, æt. thirty-eight, (second child.) Labour commenced about six o'clock Saturday morning, October 22d. Had been ill three hours before I saw her. The membranes were ruptured, and the waters driven off with considerable violence. On making an examination, the os uteri was found but little dilated; the head presenting naturally, but high at the anterior and superior aperture of the pelvis. The pains continued strong, and at very short intervals, during the whole of the day, and increased towards night: still the labour proceeded slowly.

About nine on Sunday morning, the os uteri was nearly effaced: the head made a perceptible descent. I consequently anticipated a speedy termination of the labour: but in this I was disappointed, by the cessation of any efficient pains: they were frequent and sharp, wearying, without propelling in the slightest degree. At noon, I gave a scruple of the *secale cornutum*; and, in less than fifteen minutes, it was followed by a pain of greater force and bearing than any she had experienced during the labour: they remitted but little till the child was born, which happened about an hour and a half after its exhibition.

CASE III.—Mrs. Bullock, a short stout woman, had been in labour three days before I visited her, which was late on Tuesday night, the 8th. On making an examination, the external parts were soft, well lubricated with mucus, and disposed to yield; the os uteri dilated about one inch in diameter; the head lying high at the brim of the pelvis; the efforts of the uterus frequent and tiresome. Under these circumstances, I hoped, if efficient pains came on, the labour would terminate favourably. I directed the midwife to give an enema, and promised to call in the morning.

Wednesday, ten A.M.—Things much the same; the os uteri, however, more dilated and loose; the woman very anxious. I now ordered a scruple of the powdered *secale cornutum* in tea, which produced, in ten minutes, a bearing down pain, that lasted, without intermission, for seven or eight minutes. The woman was standing, and, from the violence of the effort, I almost thought the child would have been expelled: others succeeded, but not so forcibly, for two hours. The pains now remitted, and I gave a second dose of the *secale*. The propelling efforts of the uterus again returned; the vectis was applied, and the child delivered, about an hour and a quarter after the exhibition of the last dose. The mother well; child dead.

It may be well to remark here, that this same woman informed me that her last labour was exceedingly protracted and alarming: the child then also still-born.

Though these cases are but few, they are the only ones in which I have given the ergot of rye a trial, and the result in each has been uniform. No unpleasant symptoms attended its exhibition; the pulse in none of the cases was in the least accelerated. Sickness attended one; but nausea had been complained of

previously to its administration. The only alteration perceptible was the increase or rise of bearing efficient pains, within a few minutes after its being taken. From these circumstances, I think I may safely infer, with Dr. Davies, that its action is peculiarly directed to the uterus; and that, under proper management, the dose being sufficient, and the quality of the medicine good, its effects will be found as well marked and decided as that of any other class of medicines with which we are acquainted.

ART. VIII.—*Description of an Instrument, proposed as an Improvement on the Lithotome Caché of Frère COSME.* By ANDREW BLAKE, M.D. Member of the Royal College of Surgeons, and Surgeon to his Majesty's 7th Dragoon Guards.

[With an Engraving.]

IN proposing a new, or rather an improvement on an old instrument, for the performance of the operation for the stone, I do not consider it necessary to enter into a particular description of the different modes hitherto devised for attaining the same end: neither does it appear to me that I am called upon to detail the comparative advantages of the various instruments invented at different epochs for that purpose. It will, I trust, be deemed sufficient to state, that some of the most eminent surgeons, both in their lectures and practice, give the preference to the scalpel for the performance of the lateral operation. Unfortunately, however, we are not all blessed with the dexterity of a COOPER, a GUTHRIE, or the late much-lamented Mr. DEASE, of Dublin; and, in consequence, the use of the scalpel is still confined to a very limited number of operators. My present object, therefore, is to offer to the profession an instrument possessing, in a high degree, the advantages of the scalpel, and at the same time free from the dangers and difficulties attending the use of the bistouri, or lithotome caché, invented by Frère COSME; an instrument deservedly regarded, by all continental as well as by British surgeons, as perhaps the least objectionable, and best calculated for general use, of any hitherto contrived. To it, however, it is well known many serious objections have been made. First, it is evident that its motion, while opening, or rather while the blade is diverging from its sheath, is more of a compressive, and consequently of a tearing, than of a cutting nature: hence it is more liable to be followed by inflammation, and less likely to divide the prostate sufficiently; that gland being calculated, from its structure, to recede before the edge of the instrument. Secondly, its point, if not rounded considerably, (in which case it may not cut its way out,) may wound the bladder at its fundus or sides, and

thereby give rise to infiltration of urine into the neighbouring parts, and thus occasion inflammation, and perhaps gangrene. And lastly, from the manner in which the instrument is generally used,—namely, without a proper director,—considerable knowledge, care, and dexterity are required, on the part of the operator, to avoid wounding the rectum, or internal pudic artery.

When we consider that the bistouri, or lithotome caché, is a French invention, and at the same time read the following paragraph from the pen of a French author, we may feel convinced of the truth of the dangers depicted as inseparable from its use:—“ Il est vrai qu'on peut léser le rectum et les vaisseaux hon-
teux, si l'incision est faite trop en dedans, ou trop en dehors ; que le bas-fond de la vessie peut être ouvert, si l'on élève trop le poignet, et les parois de ce viscère percées d'outre en outre, si l'on enfonce l'instrument d'une manière trop brusque, et avec trop de force.”—RICHERAND.

A slight examination will, I hope, convince most surgeons that the dangers above stated as attendant on the use of the bistouri caché, have been obviated in the construction of the instrument of which a plate is subjoined.

It will be observed, in the instrument I propose,—First, that the progressive motion forward and outward of the blade, while it is assuming the position intended to be given it for the performance of the operation, enables it to divide, without the least violence, all that part of the prostate gland and neck of the bladder that may present itself to its edge. Secondly, that, by the mode in which the instrument opens, it tends, with its first joint, (marked No. 2 in the figures C and F,) to push the coats of the bladder before it, should they come in contact with it, and thereby prevents the possibility of their being wounded by the blade. And lastly, the director, which, during its introduction into the bladder, forms an integral part of the instrument, becomes a safe and steady guide for the opening and withdrawing of its cutting portion, by its enabling the operator to hold the whole, with the left hand, in a proper direction, and close to the arch of the pubis; thereby preventing any probable risk of wounding either the rectum or internal pudic artery, while the division of the prostate gland and neck of the bladder is completed, with comparatively little violence.

I shall here submit the only objection which has been made to me concerning the facility of using this instrument,—viz. that, should it be intended to make an opening, let us suppose, of an inch and a half in the neck of the bladder, the point of the instrument must be introduced to that extent at least beyond that part, previously to our being able to open it. However, I should hope, when it is considered that the ordinary diameter

of the bladder far exceeds the extent of any opening ever necessary for the extraction of a stone, such an objection will be found merely theoretical. Perhaps this circumstance, on the contrary, ought to be regarded rather as an advantage, as it ensures the necessity of a sufficient introduction of the instrument into the bladder previously to its opening; it having happened more than once that even an experienced operator, when using the scalpel, fancied he had got into the bladder, when he had merely cut the parts exterior to it: and there is no reason why the same unpleasant mistake might not occur while using the bistouri caché.

Directions for using the Instrument.

In performing the lateral operation with this instrument, we are to suppose the previous steps of the operation completed, as if we were about to use the common bistouri caché, or the cutting gorget; we then take hold of it, as it is represented in figure A, in the right hand, and introduce it into the bladder as if it were the bistouri caché; and having ascertained, by the flow of urine, and by its touching the stone, that it is fairly in that viscus, we are to withdraw the staff, and place the fore and middle fingers of the left hand on the part of the director marked 7, and the thumb on that part of it marked 8, by which we obtain a firm hold of it. Having done so, we raise the left hand, by turning the little finger towards the right groin of the patient, so as to give the cutting part of the instrument the exact direction we wish; while, with the right hand, we push in the graduated handle marked 5 and 6, as far as it will go. At this period the instrument is open in the bladder, (having divided all that part of the prostate gland and neck of the bladder which opposed it,) and in that state in which it is represented in figure B; so that it only remains for us to continue to hold the director steadily, with the left hand, close against the arch of the pubis, and to give the blade of the instrument the proper obliquity, so as to avoid the rectum and internal pudic artery; while we withdraw, with the right hand, the instrument, as it is represented in figure C. When we are about to withdraw the lithotome from the director, if we place the top of the right thumb, and press for a moment against the point of the director marked 10, in figure B, we shall find that we facilitate considerably the disengagement of the instrument.

Should the operator wish, after having cut through the neck of the bladder and prostate gland, to diminish the extent of the cutting power of this instrument, on the principle recommended by BOYER in France, and Mr. GUTHRIE in this country, in order to avoid, with more certainty, the risk of wounding the pudic artery, he can very easily do so by withdrawing, at this

stage of the operation, by means of the fingers of the right hand, that part of the instrument marked 6 in figure B, so as to bring the direction of the blade into that state in which it is represented in the reduced figure marked F.

These directions are applicable when the operation is to be performed on an adult; but, should the operation be performed on a child, it would perhaps be preferable to have an instrument made on a small scale for that purpose, so as to correspond in size with the staff used under such circumstances.

*Explanation of the Plate.**

A. The instrument within its conductor, in the state in which it is previous to its introduction into the bladder.

B. The instrument with its blade open, as it is when about to be withdrawn from the bladder.

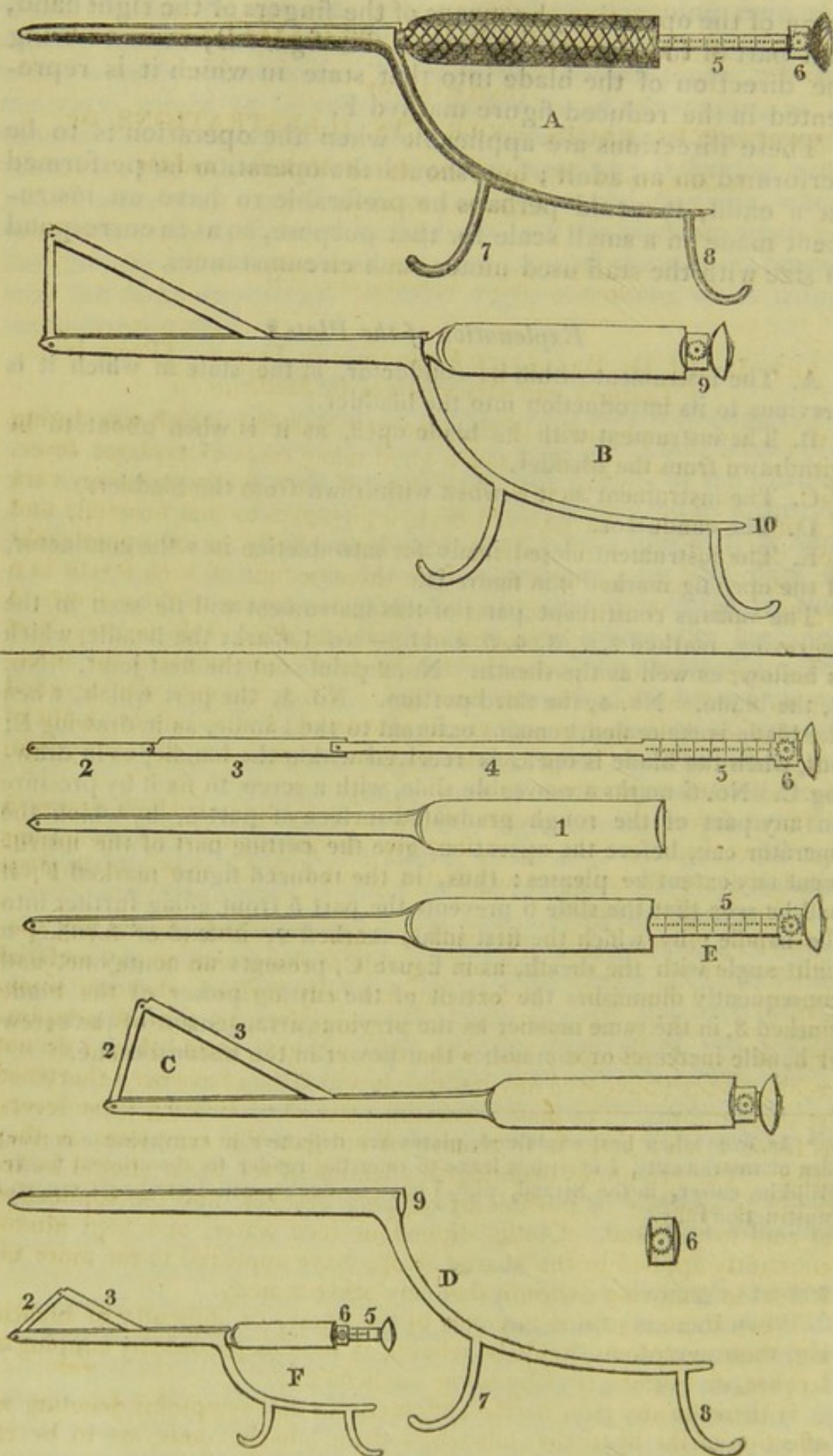
C. The instrument as it is when withdrawn from the bladder.

D. The conductor.

E. The instrument closed ready for introduction into the conductor, at the opening marked 9 in figure D.

The various constituent parts of this instrument will be seen in the engraving, marked 1, 2, 3, 4, 5, and 6.—No. 1 marks the handle, which is hollow, as well as the sheath. No. 2 points out the first joint. No. 3, the blade. No. 4, the third portion. No. 5, the part which, when the blade is concealed, remains external to the handle, as in drawing E; but, when the blade is open, is received within the handle, as in drawing C. No. 6 marks a moveable slide, with a screw to fix it by pressure on any part of the rough graduated surface of part 5, by which the operator can, before the operation, give the cutting part of the instrument any extent he pleases: thus, in the reduced figure marked F, it will be seen that the slide 6 prevents the part 5 from going further into the handle; by which the first joint, marked 2, instead of forming a right angle with the sheath, as in figure C, presents an acute one, and consequently diminishes the extent of the cutting power of the blade marked 3, in the same manner as the previous arrangement of the screw or handle increases or diminishes that power in the bistouri caché.

* As, even when best explained, plates are defective in conveying a correct idea of instruments, I must beg leave to refer the reader for the original to Mr. Millikin, cutler, in the Strand, who, I have no doubt, will describe its use and construction fully.



COLLECTANEA MEDICA:

CONSISTING OF

ANECDOTES, FACTS, EXTRACTS, ILLUSTRATIONS, &c.

*Relating to the History or the Art of Medicine, and the
Collateral Sciences.*

Floriferus, ut apes, in saltibus omnia libant,
Omnia nos, itidem, depascimur aurea dicta.

ART. I.—*Of Dr. BAILLIE's Experience in Fevers.* [From his
“*Lectures and Observations in Medicine.*”]

WHILE I was a physician of St. George's Hospital, which was during a period of thirteen years, I saw a good many cases of typhous fever. There were generally three or four cases of such fevers under my care at a time. Since I have ceased being a physician to that hospital, and more especially since my patients have been chiefly in the upper ranks of society, I have not seen more than three or four of such fevers in a twelvemonth. With respect to the contagious nature of these fevers, I am convinced that it is in general not considerable. I do not recollect an instance in which a patient in that hospital communicated the infection to a patient lying in the next bed. When patients are crowded together, and the apartments are ill ventilated, I entertain no doubt of this species of fever being capable of being communicated readily from one individual to another.

These fevers are sometimes without any symptoms which denote a local affection of a vital organ, but very frequently there are symptoms which indicate an inflammatory action of some of the viscera in the chest or belly, or of the brain.

In these fevers, I have met with no remedies which possess any specific powers of cure, or which are capable of shortening, in any material degree, their duration. Before they are fully formed, they are sometimes cut short by an emetic, by active purgatives, by profuse perspiration, or by cold affusion; but, when they are quite established, I do not recollect that I have seen any instance in which they have been shortened by these means. The most successful method of treating these fevers, as far as I have seen, is to remove or mitigate the symptoms as they arise. The symptoms denoting an affection of the brain should be relieved as speedily as possible by cupping, leeches, and the application of cold to the head. Cloths dipped in iced water, and kept almost constantly applied to the shaved scalp, have appeared to me more effectual in removing delirium than any other remedy.

When there is pain in any part of the chest, or difficulty of breathing, these symptoms should be relieved as soon as possible by cupping or leeches, or blisters, and by saline medicines.

If there be any pain in the abdomen, or any symptoms denoting an affection of the liver, the stomach, and the bowels, these are to be relieved by their appropriate remedies.

If there be too vigorous a circulation over the body, without any apparent local affection, it may be corrected by a very cautious bleeding from the arm, by purging, and by saline medicines. If the actions of the constitution be feeble, they may be strengthened by tonic and stimulating remedies, the best of which I believe to be wine in suitable doses. By this mode of treatment, fevers will often terminate favourably, which otherwise would have been fatal.

During the greater part of the time in which I have practised medicine, physicians in general, and myself among that number, have, I believe, been too sparing in taking away blood in typhous fever. It was hardly ever directed to be taken away from the arm, and not often locally, except by the application of leeches to the head. Of late years many physicians have gone into the opposite extreme, and have taken away blood too profusely. In the course of a few years this remedy, like every other, will find its proper level. During the course of a fever, patients require but little nourishment; and this should in a great measure consist of farinaceous matter. Even when the fever has entirely subsided, animal food should be taken, for some time, very cautiously and sparingly. I have known some instances of the most serious relapses of fever, from patients having taken animal food too soon and in too large quantity; and I am disposed to think that the greater number of relapses arise from this cause.

Of Intermittent Fevers.—I have always practised in London, and have therefore not had many cases of intermittent fever under my care. While I was a physician of St. George's Hospital, I perhaps saw five or six cases of it in a year; and this chiefly occurred among the poor Irish who lived or lodged in St. Giles's. In some of these cases, the origin of the disease could be clearly traced to marshy effluvia; but in others this cause could not be traced, as the patients reported that they had lived in St. Giles's for several years, and had always been employed as labourers in London. They may, however, have been exposed to marshy effluvia in the neighbourhood of London, without knowing or recollecting it.

I have known a good many cases in which bark alone would not cure an ague. In all of these cases, as far as I now recollect, when a grain of calomel was given every night for eight or ten nights, bark cured the ague in the course of a few days. This practice I learnt from my friend Dr. David Pitcairn. The powder of bark I consider as a more efficacious remedy for agues than the extract of bark.

According to my experience, arsenic cures agues in general sooner than bark, and produces no bad effect, if it be given in proper doses, and be not continued too long. When the ague has been stopped for three or four days, the arsenic should be given up, and half a drachm of bark, in powder, should be given three or four times a-day, for perhaps a week.

I have known some cases of ague cured by the powder of calamus aromaticus; and I have understood that it is not an uncommon remedy among the lower orders of people in Sussex.

ART. II.—*An extraordinary Case in which Clots of Blood oozed from the Face of a Girl.* Communicated to Dr. CHAPMAN. [From the *Philadelphia Journal*, No. 2, New Series.]

SIR,—In the sixteenth Number of your Journal, you express a wish to have an authentic account of the extraordinary case of a girl in this neighbourhood, thirteen years old, “from whose face and under the eye clots of blood would occasionally ooze.”

As the case fell under my observation, I have presumed to give you the following facts.

The accounts of the case by General Eavans, Dr. Shuler, and Drs. Smith and Casey, some time ago in the Indiana papers, are correct and without exaggeration, as can be testified by a hundred people.

The girl is small of her age, but well made, of a good disposition, and of a poor but honest and industrious family. In the spring and summer of 1823, a little blood would occasionally appear about her eye and face, which neither excited alarm nor curiosity. In the November following, however, the quantity became suddenly very large. The family in which she lived think a pound was found some mornings about her face and pillow in clots. When this oozing of blood had continued about five days, a physician being called in applied, without knowing for what reason, a plaster to the place from whence the hemorrhage came. But the blood soon pushed it off. About this time, fimbriated substances, resembling moss or spiders, and pieces of bone, were discovered among the clots. Henceforward things changed.

Generally a single clot of blood would appear first in the morning, and be followed by lumps of fleshy substance and pieces of bone, alternately, all day. The bones were of every size under the weight of two drachms, of various and irregular shapes, generally having one or two smooth sides without any periosteum, while the other sides appeared much like fractured surfaces. They continued to come for about six weeks, with an intermission of three or four days. At first they came as often as once in every ten or fifteen minutes, and were very hard; at last they came much more seldom, and gradually assumed a cartilaginous appearance. They generally adhered to the cheek slightly, by a kind of glutinous substance, till pulled off. Their first appearance was astonishing. While the bystanders would be gazing at the place from whence they came, they would be suddenly surprised with their appearance, without being able to tell how they came; for the girl would feel no pain, and not the least sign of an opening or a scratch could ever be discovered. All agreed in thinking they must come through the skin.

The lumps of flesh that alternated with the bones, were about the size of the end of a finger, and had much the appearance of the soft kind of polypus.

All these things appeared about the left eye, and mostly upon the cheek under the eye. Two pieces of cartilage made their appearance between the eyelid and eye. The last of all that appeared was a

cartilage nearly as large as the nose, which came through the left nostril, causing in its passage considerable irritation.

During this extraordinary case, I visited the girl several times, and once in company with several other physicians. Not the least sign of swelling, discoloration, soreness, or any thing else indicating disease, could ever be discovered about the girl; except she acknowledged that she had occasionally a slight pain about her hips and loins.

I have been told that, soon after the last cartilage made its appearance, she commenced menstruating regularly, and nothing strange has ever appeared about her since. During the time the bones were coming, the girl was subject to eructating, after eating, a kind of gas of a very strong smell, which the family compared to that of whiskey.

CRITICAL ANALYSIS

OF

ENGLISH AND FOREIGN LITERATURE,

RELATIVE TO THE VARIOUS BRANCHES OF

Medical Science.

*Quæ laudanda forent, et quæ culpanda, vicissim
illa, prius, cretâ; mox hæc, carbone, notamus.*—PERSIUS.

DIVISION I.

ENGLISH.

ART. I.—*On the Action of Calomel. Being a Critical Analysis of Part III. of "Sketches of the most prevalent Diseases of India; comprising a Treatise on the Epidemic Cholera of the East, &c."* By JAMES ANNESLEY, Esq. &c.—8vo. pp. 464. London: T. and G. Underwood. 1825.

HAVING, on a recent occasion,* entered somewhat largely into the subject of the Indian cholera, we do not feel disposed to return to the discussion; particularly as we believe that the great majority of our readers are more interested in what occurs under their own immediate observation, than in maladies, however dreadful, of which they only hear as the scourges of distant countries. Influenced by these considerations alone, and in no degree from regarding the work before us as inferior in interest to others which have preceded it, (for this is very far from being the case,) we have limited our analysis to that part of the subject which possesses general interest: we mean the practical observations on the effects of Calomel.

* See our analysis of a "Report of the Epidemic Cholera," &c. by W. SCOT; No. for Jan. 1825.

It is truly remarked by our author, that, although this medicine has been employed in practice during the last two centuries, yet even now it seems to be matter of doubt to what extent it may be given with advantage, and what its *modus operandi* on the living system may be. At its first introduction, it was chiefly had recourse to in doses of a scruple and upwards, as an active purgative, either alone or in combination, in those cases where a full and free evacuation of the secretions of the liver and alimentary canal were intended, as well as to effect the restoration of any natural secretion which had been arrested by disease. This is precisely the application of calomel which has been proposed by various writers of the present day, who have been supposed to originate a method which, in fact, they only attempt to revive. A short quotation from Mr. ANNESLEY's volume will set this matter at rest.

“Horstius stated that the ‘*mercurius dulcificatus*’ may be given in doses of one scruple, or half a drachm, ‘*ad viscidos humores magis attenuandos* ;’ and Deleboe Sylvius recommended it in the same doses, as an attenuating purgative. Wepfer prescribed it in doses of twenty grains, in combination with other purgatives, in affections of the head. Dr. Friend advised it in simple doses, in conjunction with purgatives and emmenagogues, in *emansio* and *obstructio mensium*. Schroder has expressly stated that ‘*mercurius dulcis vulgaris, draco mitigatus, omnes humores noxios, sine perturbatione laude expurgat, unde vel infantibus exhiberi poterit. Dari potest ad 3ss. : cum aliis purgantibus à gr. viij. ad xv. et plures.*’ Juncker has made mention of the exhibition of calomel in doses of twenty and thirty grains; and Geoffroy has recommended it to be given in doses of from five grains to thirty, according to the circumstances of the case. These authors seem, however, not ignorant of the mode of exhibiting this preparation in much smaller doses; but, whenever they resorted to this manner of prescribing it, their object appears to have been to affect the system with the mercurial action. Whenever they were desirous of obtaining advantageously its purgative effects, they exhibited it in the large doses above stated, at considerable intervals between each; a mode of exhibiting it founded on their experience of its effects.” (P. 378—380.)

After this period, however, the remedy was employed with considerably more caution,—or, perhaps, we might say, timidity; and, according to our author, with considerably greater risk of producing the deleterious consequences which they feared from its too free administration: “two grains were found to irritate,—five were therefore inferred to irritate more.” This, unquestionably, is the general impression on the minds of practitioners in this country, with respect to the agency of calomel: distrustful of its effects in large doses, they endeavour to remove all risk of inconvenience by giving it in very limited portions, while they attempt to secure all the benefit of its

operation by the frequency of its repetition. Many practitioners, in an acute case, would administer three grains of calomel every three hours, who would not venture to give a scruple once in twenty-four hours. This we assert as matter of fact,—not as expressing any opinion touching the comparative merits of the two methods: but we may mention that Mr. Annesley has distinctly made up his mind between them, and thinks scruple doses once a-day more powerful in arresting the progress of disease, and less apt to be followed by serious constitutional evils. Hear him:

“The prejudices of early instruction are difficult to be overcome: they lead us to draw conclusions from inadequate premises, and sometimes to reject useful inferences, because they accord not with preconceived or generally-adopted opinions. Ignorance also leads us to adopt, without examination, what is generally received, even although the most palpable objections may be found to it in our daily experience.

“Influenced, in some degree, by a similar partiality of judgment and indolence in research which I here condemn, I was in the habit of administering calomel only in moderate doses, until I perused the valuable work of Dr. Johnson; after which I began, in my hospital at Trichinopoly, to exhibit it in doses of one scruple each, to a patient in the advanced stage of dysentery: its action in this instance was so strikingly useful in procuring ease and comfort to the patient, that, although the case was not successful, I determined to give it a trial at the commencement of those acute diseases which we find most distressing and destructive in India,—namely, in dysentery, hepatitis, and fever; diseases which, in general, commence with great excitement, and excessive irritability of stomach. I accordingly adopted this practice, and have followed it for upwards of eight years, and in no instance have I had reason to be dissatisfied with its effects.

“Having been even at that time prepossessed in favour of large doses of calomel, it was not a difficult matter to make me a convert to the practice; but I adopted it with very different views from those with which it was then recommended, and modified it accordingly, as will be seen in the sequel: nevertheless, so great were the prejudices that existed against this practice, even amongst men of professional eminence and reputation, that I have often doubted my own judgment in suggesting to those gentlemen who were placed under me, on their first arrival in India, the propriety of administering calomel in larger doses than are commonly thought necessary, although the result of my own experience was so decidedly in favour of the practice; and I have sometimes felt great difficulty in meeting, and successfully resisting, the various objections which have been made to it. I consequently did not press its use, but gave the confident assurance that calomel could be used in large doses with perfect safety; and established the fact by showing its effects when so administered by me. A very short time convinced them of its advantages, and the practice became general from conviction, and not from persuasion.” (P. 383—385.)

The author deprecates, and in our opinion not without reason, the idea so often inculcated, that mercury, to be useful, must affect the gums,—nay, that this affection is to be regarded, not merely as an index, but in some degree as a measure, of its utility. Were this the case, how useless would calomel be in the fevers of this country; and we put it as a question to our readers, whether they have ever seen salivation produced in common continued fever, by the administration of free doses of calomel every night, *unless the exhibition of the medicine was continued after the fever had given way?* We believe that it is a very bad rule to continue the administration of calomel till salivation be produced; for in some this never will occur: but that, on the contrary, it is a good rule to intermit the mercury as soon as the gums are at all affected, as the constitution may then be easily kept under its influence. In such cases, however, we suspect that the gums become affected because the fever has subsided,—not that the fever has subsided because the gums have become affected.

With a view of ascertaining the effects of calomel upon the mucous membrane of the stomach and bowels, the author undertook some experiments upon dogs; of which the following interesting details are given:—

“About eleven o'clock A.M. Dec. 1, 1823, I gave three healthy dogs the following doses of calomel,—viz. 3j. 3ij. and 3iij. After they had taken the calomel, they were kept in a room, and observed narrowly for twenty-four hours.

“The dog who took 3j. did not appear to feel any kind of sickness till night, when he vomited a little. He was lively the whole time, and ate his food well; had been purged two or three times: dejections very dark grey colour.

“The dog who took 3ij. was likewise lively, and ate his food well: vomited two or three times, and was purged more than the other. He passed tape-worms, and the dejections were black.

“The dog that took 3iij. was heavy, and apparently uncomfortable the whole day, but did not vomit at all. He was purged, and passed a very long tape-worm: dejections also black. Although he looked somewhat heavy before he took the calomel, and was apparently dull and uncomfortable during the day on which the calomel was administered, he improved very much in his appearance on the following day, and was very lively.

“At ten o'clock A.M. on the 2d December, (twenty-four hours from the time at which the calomel was taken,) the three dogs were hanged; and, as the largest dose was given with a view of ascertaining the worst effects of this preparation, I first examined the dog that took it, five minutes after he was dead.

“The veins were beautifully injected, the liver healthy, and the gall-bladder full of bile.

“The external coat of the stomach was of a pale colour, and seemed to be rather thickened.

“The small intestines had a peculiarly thickened feel, very similar to what is observed in cases of cholera; but I am not quite sure whether this thickened state is not natural to the healthy intestine of the dog.

“The stomach was laid open: its internal surface was considerably corrugated, and of a dusky red colour, but possessing neither the appearance of high arterial action or of venous congestion. The corrugations were in a longitudinal, and not in a circular direction.

“The small intestines were laid open: their internal surface was loaded with thick, tenacious, cream-coloured matter, such as is generally found in the intestines of those who die of cholera. It appeared that the calomel, in this instance, had no other effect upon the dog than that of diminishing the vascularity of the stomach, as it did not seem to have mixed at all with the secreted matter of the intestines, or to have acted upon the gall-bladder. Probably the time was not sufficient for the purpose.

“The dog which was next opened was that which took 3ij. of calomel.

“The appearance of the stomach, both externally and internally, was infinitely more vascular than observed in the preceding experiment. The corrugations were, however, precisely of the same nature as those already described, and the venous system was beautifully injected; but there was a very considerable flow of bile in this dog, and the contents of the duodenum were more fluid, and less tenacious.

“The dog who took 3j. was last opened, and in him also the venous system was highly injected; but we were surprised to see a much higher degree of vascularity in the stomach of this dog, particularly at the internal surface, than in either of the two others.

“The bile, too, had flowed freely into the duodenum, and the contents of the bowel were highly coloured with bile, and not at all tenacious. The corrugations were of the same character, viz. longitudinal.

“Observing that the vascularity of the stomach was greatest in the dog which took the smallest quantity of calomel, I procured a healthy dog, and, without giving him any of this preparation, had him hanged, and examined five minutes after he was dead, in order to see the natural state of the stomach,—at least unoperated upon, and unchanged by any medicine. I was greatly surprised to find that the stomach of this dog was infinitely more vascular than that of either of the three dogs already examined, and was in what I really would have considered a high state of inflammation. The corrugations were circular, and more or less vascularity extended throughout the alimentary canal, which was covered with a glairy transparent mucus.

“In order further to ascertain the correctness of these inferences, the following experiments were performed.

“At one o'clock A.M. December the 6th, 1823, I gave 3ij. of calomel to two dogs each, that had been kept in a separate room for two or three days previously, and had been fed upon rice and sheep's head. After taking the calomel, they were sick, and vomited, but seemed to

suffer no other inconvenience; for they ate well, and were seemingly in good spirits.

"At eleven A.M. the 8th December, forty-eight hours after taking the calomel, one of the dogs was hanged: the other was preserved, to show that no inconvenience attended the ingestion of so large a dose of calomel; and this was amply proved, as the dog continued well, and was in better condition a month after the experiment than he was before.

"I examined the dog that was hanged as soon as possible after he was dead, and the following were the appearances exhibited:

"The veins, as usual, were beautifully injected; the liver was quite sound, and the gall-bladder rather empty. The external appearance of the stomach, which was very much distended with rice, was of a pale colour, with some large blood-vessels spread over it; and, on being laid open, the rice near the pylorus was marked with bile, of a beautifully bright orange colour, while that in the upper part, near the cardia, was perfectly unchanged. On removing the rice from the stomach, it was found that its surface only was tinged with bile.

"The stomach, cleared of the rice, exhibited a beautifully corrugated appearance throughout its whole surface, with a peculiarly pale pink blush; but nothing like excitement or vascularity was evident.

"The corrugations were in the transverse direction, and were more marked near the cardia; but were less so at the lower part of the stomach, near the pylorus, where it was deeply tinged with healthy bile. The whole surface of the duodenum was covered with bile, without showing the slightest trace of vascularity or viscid secretion.

"The jejunum was filled with digested food, well mixed with bile. In the lower part of the intestine, the contents were more consistent, and of that peculiar blackish grey colour which is always produced by mixing calomel with the secretion of the intestine.

"The inner surface of the colon was in a high state of arterial vascularity; the transverse ridges being not unlike the *valvulae conniventes* in the human small intestine.

"The rectum was likewise in an increased state of vascularity, with longitudinal corrugations.

"From comparing the state of this dog's stomach with those which I first examined, it seems that the first effect of calomel, in large doses, is not only to diminish vascularity, but also to produce a peculiar action of the fibres of the stomach, and that this organ requires a certain period to elapse before it can resume its natural function." (P. 386—396.)

Mr. Annesley, in the next section, proceeds to state his belief that calomel produces a chemical action upon the mucous secretions, in consequence of which their mechanical properties become modified to a great extent. He has frequently mixed, *in situ*, small quantities of calomel with the tenacious mucus occasionally found in the intestinal canal, on examination after death: the secretion, he informs us, when thus treated, assumes a dark grey colour,—becomes more fluid, less tenacious, and consequently more easy to be detached from the subjacent membrane.

He conjectures that a partial decomposition of the calomel is effected; a portion of the mercury being converted into a dark grey oxide, and imparting its colour to the secretions with which it is mixed. If then, it is asked, the calomel thus attenuates and separates the viscid mucus, may not its operation in the duodenum be the means of removing obstructions from the common duct, caused by this secretion; thus effecting a discharge of bile, which has been mechanically retained? "In this case the dose of calomel may be considered as acting chemically upon the mucous secretion, and mechanically as regards the duct." It is considered of importance that the ducts should be cleared in the first instance; as it is argued, that increasing the quantity of bile, by small doses of calomel, before the ducts were sufficiently cleared for its free exit, would but augment the evil. Hence the necessity of giving purgatives until dark green motions have been produced. "When, therefore, we see the change from dark grey (the colour which calomel alone gives the mucous secretion,) to dark green, we may rest satisfied that the ducts are emulged, and that the calomel and cystic bile are acting conjointly upon the bowels. Hence the propriety of continuing this remedy till healthy action be produced, will appear evident."

A general idea of the author's manner of employing the remedy, may be gathered from the following observations:—

"SECTION IV.—*General Remarks on the Use of Calomel in Disease.*

"It is not the intention of these observations to recommend the indiscriminate use of calomel; but I maintain, from very extensive experience of its effects, and from the experiments already stated, that in many acute diseases, and particularly in those of India, it may be given boldly, and without risk; and that injurious effects are more likely to be produced by frequently-repeated small doses, which keep up a certain degree of irritation and nausea, than by a full dose given at once, and discontinued when the objects looked for are gained. These objects I conceive to be to allay irritability, diminish vascular action, and to *cleanse* the intestinal canal of the tenacious matter which often lines it, and in many cases almost completely obstructs the passage through it.

"In these diseases, therefore, in which we have reason to suppose, from the great irritability of the stomach, the state of the tongue, and the functions of the abdominal viscera, that increased vascularity of the digestive canal is present, with a deranged state and accumulation of the mucous and other abdominal secretions,—as in all the types of fever, dysentery, liver complaints, &c.—calomel, in doses of from ten to twenty grains, either alone or variously combined, according to the circumstances of the case, is an excellent remedy.

"In these diseases, I have been generally in the practice of giving, at bed-time, twenty grains of calomel, with one or two grains of opium,

and sometimes without the opium, and a smart purgative draught the following morning. This practice I have repeated daily, until the excretions assumed a healthy hue. A tonic laxative was then exhibited, and continued till the natural functions of the bowels were completely restored. In these diseases, I never wished to see the mouth in the least degree affected: whenever this happened, I considered the salutary effects of calomel interrupted, because its use must be then discontinued; and it was my object to act upon the secretions of the intestines, to diminish vascular excitement in the intestinal canal, and not, in the most remote degree, to act upon the salivary glands.

"It is evident, from the preceding, that calomel is not a suitable medicine in those cases wherein an opposite state of the digestive canal and of the secretions to that described exists, and that it is calculated to prove injurious under such circumstances. Judgment, and an experienced discrimination, are requisite to the beneficial administration of this remedy under most circumstances; and I consider that it is chiefly owing to the want of this, that it is so often used with little advantage, and that so much diversity of opinion exists amongst medical men respecting the administration of it in various diseases.

"Although I was for many years fully aware of its effects in allaying irritation of the stomach, and in procuring abundant discharges of tenacious and morbid matters from the bowels, yet it is comparatively much more recently that I was led to analyse more closely its effects in disease. I always observed that the frequent repetition of small doses of calomel generally produced nausea and uncomfortable feelings, and completely deranged the functions of the stomach, which was not the case with full doses of this preparation, when given at considerable intervals, and in such a manner as to act decidedly upon the secretions and functions of the bowels; and more particularly when aided by a purgative on the following morning.

"When it is desirable to affect the constitution with the mercurial action, and to keep up that action, in order to remove any glandular obstruction, I cannot advise this object to be attempted by means of the exhibition of small doses of calomel, given at short intervals. I have always found this practice attended with unpleasant effects, and the digestive organs not unfrequently injured by it. I therefore recommend the blue-pill in preference; and that the use of it, even, should not be pushed further at any time than the production of a slight soreness of the mouth, and even not so far as that, if decided benefit follow the exhibition of the remedy, short of this effect." (P. 405—409.)

Mr. Annesley then proceeds to consider the application of calomel to particular diseases; and through these we shall follow him seriatim.

Of the Employment of Calomel in the Treatment of Intermittent, Remittent, and Continued Fevers.

Three indications are mentioned as capable of being fulfilled by its administration in these diseases:—viz. first, a diminution of the irritability of the stomach, particularly if it depend

upon increased vascular action of the inner membrane of this viscus ; secondly, a correction and discharge of the secretions of the internal surface of the alimentary canal and large secreting organs ; and, thirdly, increasing the action of these great secreting organs, and exciting the functions of the vascular system in general,—without, however, affecting the salivary glands.

In *intermittents*, the author prescribes scruple doses, which are given at bed-time, with a view of allowing it to operate undisturbed till next morning, when free evacuations are produced by infusion of senna, with salts and tartarised antimony. Occasionally an emetic is necessary ; in which case, the author recommends it to be taken in the forenoon, and the dose of calomel already mentioned exhibited at bed-time. On the second night, a similar treatment is pursued ; or ten grains of calomel may be given, with five or six of aloes. As soon as the tongue begins to clean, and the excretions assume a healthier character, the cinchona, combined with aromatics, may be given in divided doses shortly before the expected paroxysm. But we are cautioned not to begin the bark until hepatic bile is seen in the excretions ; and particularly to avoid giving it whilst “ pain, tenderness, fulness, and oppression, are felt in the hypochondriac and epigastric regions.” This advice is unquestionably correct : at the same time, from the manner in which it is given, one would be led to suppose that practitioners in this country had administered bark under the circumstances pointed out as contra-indicating it. If this be Mr. Annesley’s impression, he may rest assured that he is mistaken ; and the only point of his practice in agues, about which difference of opinion is likely to exist, relates to the dose of calomel : he gives twenty grains where, in this country, one fourth of that quantity is generally given. As soon as the disorder yields, calomel is administered in much smaller doses ; or, what is to be preferred, the blue-pill, with myrrh and aloes. When great irritability of the stomach is present during the paroxysm of an ague, scruple doses of calomel, with one or two grains of opium, may be given.

In *remittent* fevers, the author first endeavours to relieve the most urgent symptoms by bleeding ; after which an emetic, or a full dose of calomel, is exhibited, according to circumstances. If there be foulness of the tongue and bitter taste in the mouth, the emetic is given first, and the calomel afterwards, as in the case of agues. Next morning, purgatives (and, if these fail, cathartic glysters,) are administered ; a saline mixture, with the spirit ætheris nit. and tartarised antimony, being continued during the day. Congestions in the viscera are watched, and promptly relieved by local bleeding. And this plan is persevered

in till the fever assumes more of a regular intermittent form; after which, an alterative and laxative course of medicine is pursued, with the addition of cinchona. Mr. Annesley is of opinion that there is a connexion between these fevers and certain states of the moon (as the full and change), and, when it has been ascertained "at what time of the moon's age the paroxysms supervene, the bark is given two or three days previous to that, and continued until the period has elapsed."

The *continued* fevers which the author has met with are decidedly of an inflammatory character in their first stage, and calomel is exhibited, although, it is to be remembered, exclusively with a view to the two first indications above mentioned: indeed, as already stated, during the inflammatory stage of fever, there is little risk of the calomel inducing its specific effects. Here, as in other cases where there is much irritability of the stomach, opium is to be continued with the calomel; and, if there be any appearance of spasmodic constriction about the gall-ducts, this may be given to the extent of two or three grains. This addition of opium, we are assured, has no tendency to prevent the purgative effects of calomel; but, on the contrary, rather promotes its laxative operation.

Of the Use of Calomel in the acute Diseases of the Liver and Gall-bladder.

Mr. Annesley states it as his opinion that calomel ought to be used in these complaints with a view to its purgative effects alone, and "never in such a manner as may give rise to its absorption, and consequent constitutional effects:" and he continues—"I am anxious, in acute affections of the biliary organs, to avoid the constitutional effects of calomel, because I believe that, when these are produced, the energies and vital resistance of the system are thereby impaired, and the presence of this mineral in the circulation tends to keep up, in the inflamed part, a degree of excitement and irritative action which would otherwise subside; and which, I am persuaded, tends in many instances, when allowed to proceed, to occasion chronic derangements of this viscus, and even to give rise to abscesses, if the inflammation be seated in the glandular structure of the organ." (P. 424.)

These observations apply equally to inflammation of the gall-bladder and ducts.

On the Use of Calomel in chronic Disorders of the Biliary Organs.

The simplest form of chronic disorder of the liver is stated by the author to be imperfect discharge of its functions: this, however, may lead to acute and chronic hepatitis, particularly the latter. This imperfect discharge of the functions of the

liver is frequently dependent upon debility of the general constitution, and may be treated accordingly; calomel being used occasionally as a purgative: "but, in this form of disorder, mercurials ought not to be given so as to occasion ptyalism."

When, however, this simple state of deranged function continues for a certain time without amendment, it gives rise to congestion in the portal veins and infarction of the biliary ducts. This more severe form of functional disorder is marked by muddiness or yellowness of the countenance, and heaviness of the eye; by pale or clay-coloured motions; by oppression and fulness, but not pain, about the epigastrium; and by the patient becoming weak and emaciated in body, and depressed in mind. Under such circumstances, we are advised to begin with calomel, either alone or combined with aloes, over night, and a black dose next morning; which remedies are to be continued until the stools assume a healthy appearance, when the blue-pill and aloes are to be given at night, and laxatives with tonics during the day. If these fail, the nitro-muriatic acid bath is recommended, with blistering to the region of the liver.

The following account of the consequences of these derangements, if not effectually remedied, are worthy of attention.

"The derangement now described may be neglected, or it may be partially removed; in which case it generally returns. In either instance it will terminate, in a longer or shorter time, according to circumstances, in more serious disorder. It will give rise to vascular action, of a sub-acute kind, in the substance of the liver, which, whilst tending to overcome the obstruction previously existing, also gives rise to the effusion of lymph in the structure of the part where such re-action supervenes. Thus, enlargements of parts, or of the whole of the liver, take place; or the formation of tubercles and schirrous hardness is the result, even although the patient may not have been the subject of previous acute disease of this viscus. It ought, however, to be remarked that this, as well as the other chronic derangements of the biliary organs, are often the result of a previous attack or attacks of acute hepatitis: but, whether occurring as the sequelæ of the acute form of the disease, or as the primary disorder, either in a patient who has enjoyed previous good health, or in one who has suffered under some other disorder, as intermittent or remittent fever, &c., the symptoms and the treatment will be nearly the same in most of their important constituents.

"The form of chronic disorder now under consideration is indicated by the presence of the greater number of the symptoms already detailed, with the addition of a dull pain under the blade or top of the right shoulder, with uneasiness, and occasional pain and fulness, in the region of the liver, or at the epigastrium; with a white or foul tongue, dry harsh state of the skin, occasional slight paroxysms of fever, &c. This form of disorder requires the exhibition of calomel in the manner

already pointed out, in conjunction with local depletions, blistering on the region of the liver, warm poulticing, and the nitro-muriatic acid bath. In this form of disorder, the alternate use of large doses of calomel and the cathartic draught is required for a longer period, and the subsequent employment of aperients and laxatives should also be longer persisted in. More caution is requisite in resorting to the exhibition of tonics, and these should never be prescribed uncombined with aperients or laxatives.

“In addition to the congestion of the portal veins, with a loaded state of the biliary canals, and sub-acute action in parts of the viscus now alluded to, producing enlargements and tubercles where such derangements are seated, we not uncommonly find, upon dissection, an engorged state of the gall-bladder, with great distention of the hepatic ducts. In these cases, the bile contained in the gall-bladder is generally dark green, of a thick consistence, and extremely viscid; at other times it is almost as black as tar, and scarcely can be made to pass through the ducts. Occasionally the bile accumulated in the gall-bladder is of a straw colour and gelatinous consistence, and with difficulty can be squeezed through the cystic duct. In many instances, wherein a loaded state of the gall-bladder (such as is now pointed out) has been observed, in dissections of those who have died either of fever, dysentery, icterus, or of hepatitis itself, the ducts have been more or less diseased. In some cases they seem to have been spasmodically contracted; in others, they have been almost impervious, most probably from previous inflammation. In other instances they seemed to have been only plugged up by the thick and viscid nature of the secretion; and, in a few cases, lymph seemed to have been effused from the internal surface of the inflamed canal, and to have obstructed the passage of bile. These derangements, as far as my own observation goes, have generally been confined to the cystic duct.” (P. 428—431.)

Of the use of Calomel in acute Dysentery.

In this disease, scruple doses of calomel are recommended at night, with a purgative draught in the morning; in addition to which, it is frequently necessary to give the medicine during the day, that it may operate “through the medium of a partial absorption:” for which purpose, three grains of it may be given, with three or four of ipecacuanha and one of opium, *ter die*.

Of the Use of Calomel in chronic Dysentery and Diarrhœa.

When the tongue is coated and foul, the evacuations scanty and difficult, with blood or mucus, we are advised to give “a scruple of calomel with two grains of opium, or ten grains of calomel with five of antimonial powder and one of opium,” at night, and an aperient next morning. If these means fail on their first exhibition, they are nevertheless to be continued, but not to the exclusion of other means, as the warm bath and antimonials, so as to determine to the surface, and emollient

and anodyne injections. When the motions have assumed a healthier character, an alterative treatment is to be adopted.

Of the Employment of Calomel in Cholera.

In this complaint, calomel is to be employed to fulfil the first and second general indications pointed out in speaking of fever.

Our author next proceeds to make some observations on the exhibition of calomel in the *diseases of children*, in which we find the same general plan recommended of giving the medicine in large doses, with long intervals, instead of small doses frequently repeated, as is more usually done. In *constipation, worms, marasmus, convulsions, acute and chronic hydrocephalus, croup, chorea, eruptive and other fevers*, calomel is regarded as a remedy of great power, when exhibited in full doses of ten or fifteen grains, and followed up by purgatives next morning. This, in fact, is the leading principle which characterises the work; and we are perfectly satisfied that Mr. Annesley is correct in supposing that the method, too frequently adopted in this country of treating almost all the diseases of children with doses of calomel frequently repeated and long continued, is erroneous in theory, and injurious in practice. Yet we do not entirely agree with him in regarding his method as exclusively preferable: for example, in croup, we think it better to give the remedy very frequently, so as to bring on mercurial action, because we have observed that mucous membranes do not so readily throw out lymph if the system be brought under the action of calomel, and this, not its effect upon the bowels, is the indication which we feel anxious to fulfil.

Mr. Annesley concludes his interesting work (which is incomparably better *got up* than medical works usually are,) with the following general remarks:—

“The prejudices which exist respecting the exhibition of calomel, have led me to enter more fully into the subject of its use in diseases, than may appear in many to have been necessary; but I conceive that these prejudices have arisen from the inefficient and hurtful manner in which it has been usually prescribed during the preceding half century, and from the views which have guided practitioners in exhibiting it. There has been too general a desire to produce the constitutional effects of this mineral, and too little attention paid to its operation as a purgative, when given in large doses; and to its influence upon the secretions, the functions of the bowels, and the condition of the stools, when exhibited with the intention of producing cathartic effects. And, even when it has avowedly been given as a purgative, it has usually been prescribed in small, irritating, and inefficient doses; and practitioners have generally contented themselves with resorting to it once or twice, or at most occasionally; and hence they have had no opportunity of experiencing the effects arising from its more protracted use, when given in large doses, and alternating it with purgative or aperient draughts,

and such other remedies as the nature of the disease, and the circumstances of particular cases, may have required.

“Erroneous notions respecting the operation of calomel have also been long entertained, and a timid mode of exhibiting it has been the consequence. The dose of the medicine has been assigned by authors of modern Dispensatories, and other writers, with a precision and a limitation which were by no means requisite; and those who merely followed the recommendation of others, without thinking and acting for themselves, either blindly adopted the same practice, or, if they did attempt to modify it, proceeded no further than to exhibit the medicine more frequently: and thus they actually resorted to a more hurtful mode of prescribing it than any other they could have pursued.

“The experiments which I have detailed, but, still more decidedly, my extensive experience of the effects of large doses of the remedy, when given in the way I have described, show its propriety; but even this mode, although the safest which can be adopted, requires judgment and tact in the practitioner for its efficacious employment. The empirical and indiscriminate use of the best medicines, and the inappropriate application of the most efficient practice, have been the frequent causes of their unmerited neglect, and of the most erroneous notions respecting them: causes, however, which can operate only for a time, and which will gradually disappear before the more general diffusion of professional science, and a more accurate and enterprising spirit of inquiry.” (P. 462—464.)

DIVISION II.

FOREIGN.

ART. II.—*Mémoires sur la Nature et le Traitement de plusieurs Maladies.* Par M. le Baron PORTAL, premier Medecin du Roi; Chevalier de l'Ordre de St. Michel; Officier de l'Ordre Royal de la Legion d'Honneur; Membre de l'Institut (Academie Royale des Sciences); President d'Honneur perpetuel de l'Academie Royale de Medecine, du Cercle Medical, et de la Societé de Medecine pratique de Paris; Membre du Conseil general des Hospitaux et Hospices; Professeur de Medecine au College Royal de France, d'Anatomie au Jardin du Roi, &c. &c.—Bertrand, Libraire, Paris, 1825. Pp. xxi. 480.

Memoirs on the Nature and Treatment of several Diseases. By M. Baron PORTAL, principal Physician to the King; Knight of the Order of St. Michael; Officer of the Royal Order of the Legion of Honour; Member of the Institute; honorary perpetual President of the Royal Academy of Medicine, &c. &c.

It is not without some compunctious visitings of conscience, that we, who profess to be yet untouched by the hand of time, presume to criticise the labours of the veteran, the title of whose work stands at the head of this article. Baron PORTAL has

been a public teacher of his profession for a period of nearly sixty years; he has published numerous works,—indeed, there is scarcely a medical subject which he has not illustrated; and now, at an age when most men are gone to their last habitation, or are content to repose under the shade of their laurels, he again appears before the public as an author. But extremes meet; and, without more particularly alluding to the old proverb, which would make the Baron very much our junior, we would venture to remark, that it is lamentable to see too many men on this side of the water, the decay of whose intellectual faculties is fully commensurate with that of their physical powers, still retaining all the eagerness for employment, all the ardour for professional or literary distinctions, which characterise, and honourably characterise, the young and rising practitioner. This we say is lamentable, because it too often destroys the effect of the well-earned reputation of former years,—it renders that old age ridiculous, which in itself ought to be, and is when employed with dignity, most respectable and venerable; and it is too often traceable to the indulgence of one of the meanest propensities of our nature, the love of gain. There are, in our estimation, many motives that ought to induce the aged practitioner to be silent, but very few to induce him to write. We by no means wish to insinuate that all, or even the greater number, of the above remarks are applicable to the author before us: at least, it is our intention to let our readers judge for themselves; though we are free to confess that some of the practice which we find recommended in the progress of the work does appear to us rather strange, and not at all reconcileable to our English notions, even after we have made an allowance for difference of climate, constitution, habits of living, &c.

The present volume of M. Portal's Memoirs, which is the fifth, contains essays on various subjects: the first consists of observations upon Typhoid, or pernicious Remittent and Intermittent Fevers;—the second memoir treats of those Inflammations of the Intestines which succeed to diseases of the liver;—the third, which in fact occupies above half the book, is an essay on what the Baron calls *Pneumatie*, for which we have no corresponding term, the nearest translation being Emphysema. The word *pneumatie* is, in fact, one of our author's coining; and he introduces it as explaining those diseases arising from the formation or development of different gases in the living body; in the same way that *Hydropsie* is applied to collections of fluid. He, therefore, subdivides *pneumatie* into several species, which we shall introduce to our readers' notice presently. Next to this long disquisition follows an essay on the mode of prescribing remedies, followed by the relation of several

cases, in which the author's success was remarkable ; and the volume finishes with the Oration pronounced by M. Portal, as president of the jury of the hospitals of Paris, for the nomination of what are called internal and external pupils in medicine and surgery.

We say nothing of the editor's advertisement, although it occupies one-and-twenty pages ; since it only, in fact, details, somewhat more at large than we have done, the contents of the work itself.

We now proceed to the consideration of the first paper, containing observations on *typhoid, or pernicious remittent or intermittent fevers*, coming on, contrary to all expectation, during or after other diseases, and which have been cured by bark in substance.

M. Portal begins by stating the general belief, among medical men, in the efficacy of the cinchona in certain fevers and in gangrene, and the discordance of opinion as to its employment in many other complaints. To these points he directs our attention ; but he previously gives us a few rules by which we may decide whether the use of the bark will be salutary or not ; or, finally, whether it is likely to produce ill consequences. The chief of these aphorisms are—1st, that the cinchona is more efficacious in proportion as the fever approaches more perfectly to the intermittent type ;—2d, that, instead of being salutary, it is generally hurtful where fever has no remissions ;—3d, that, in the treatment of all fever, whether continued, remittent, or intermittent, there are circumstances which oblige us to administer the bark as soon as possible, without any previous preparation, such as the true typhus ; whilst in other fevers the typhoid symptoms are so obscurely marked, with reference to others which are more apparent, that it is necessary to precede the exhibition of the cinchona either by vomits, purges, bleeding, blisters, or other remedies. In other circumstances, a fever may be considered rather beneficial than hurtful, and it might be dangerous to arrest it by the bark. With these distinctions we are not disposed to quarrel ; but, if there is any justice in them, what are we to say of the following paragraph, which is illustrated by the relation of some very extraordinary cases ; one or two of which we shall present to our readers.

After having appealed to the works of most of the celebrated physicians of France, England, and Italy, in confirmation of his views, our author adds—“ It is not only in the treatment of continued, remittent, and intermittent fevers, regular or irregular, that the above-named celebrated physicians have happily employed the bark ; they have also prescribed it, with admirable success, in the treatment of acute and chronic diseases, complicated with periodical accidents of different natures,

—such as pains, inflammations, comatose symptoms, of a greater or less degree of intensity, spasmodic, and even convulsive diseases ; in fact, in a great number of cases where it has required great discernment to discover a febrile principle, sometimes even truly typhoid." (P. 6.) Now, the only comment we have to make upon this passage is, that, if this be true, there was no need of making any restrictions at all with regard to the employment of cinchona ; since it will even succeed, as we shall presently see, under circumstances which would appear to forbid its exhibition entirely. We, therefore, at the risk of being thought tedious, proceed to translate the first case recorded, in illustration at once of M. Portal's views and our own.

M. De Lantier, author of the *Voyage of Antenor*, was attacked with jaundice, attended with enlargement of the liver, perceptible to the touch. The urine was high coloured, thick, and in small quantity. Some remedies had been prescribed for these symptoms, though without much benefit. The patient believing that he should be benefited by a residence at Corbeil with one of his friends, went there towards the end of September, after a very hot summer. Though rather better, he had a slight accession of fever every evening, which began with a trifling chill, followed by considerable heat, and sleeplessness during the night ; with a little moisture of the skin towards morning, the heat of the skin being always strongly marked. The jaundice became intense, and œdema of the feet appeared, and made some progress. The fever, which had lasted some days, was one evening suddenly augmented in a very violent degree : the cold fit was longer and more intense ; the hot stage was also aggravated ; and the sweat, which succeeded towards morning, was copious, and followed by extreme weakness. The next day, the patient revived, and appeared better until the evening of the day following, when a new accession of fever took place. This was more violent than the preceding one, the hot stage being attended with delirium ; and it terminated in abundant sweats and frightful weakness, amounting almost to syncope. The whole of the day, however, the patient appeared better, excepting that he felt weak. It was then thought proper to remove M. De Lantier to Paris ; but he experienced a paroxysm of fever on the route, terminating in the same manner. The patient had remained nearly in a state of coma, replying only to questions by very vague and unconnected answers.

On the following morning, when visited by M. Portal, the patient was of a deeper yellow than when he went into the country ; the hepatic region was more prominent, and harder ; the pulse was very feeble ; the skin moist ; and the intellects were disturbed : nevertheless, it appeared to M. Portal that the patient was enjoying a remission of the fever, though in a state of such weakness as to make it probable that another paroxysm, which could not be retarded, would carry him off. Sinapisms were applied to the feet, together with the cinchona in the form of decoction, to be taken every two hours ; and to each dose of which one drachm of the powder of bark was to be added. M. Portal took his leave, having given a fatal prognostic.

He then goes on to remark, that he should have ordered the bark with more confidence, had he been convinced that the fever which existed was really intermittent, for then he knew its success would have been complete; but he believed the disorder to be remittent, and that it was moreover complicated with disease of the liver. However, he conceived the danger was so imminent, that, having no other remedy for the fever but the bark, it would be easy afterwards to prescribe for the hepatic affection, provided he could save the patient from the febrile attack.

The next day there was but a slight return of the fever; and only two other and slighter paroxysms occurred. The use of the bark in powder, mixed in water, was prescribed for seven or eight days, in the dose of one drachm twice in the day; diminishing it gradually to a scruple three times, and afterwards once, in the day. The patient experienced such benefit from this treatment, that not only was the fever conquered, but the jaundice disappeared, and the size of the liver was considerably diminished. He drank the waters of Vichy for fifteen days, and was completely cured.

The only remark we shall make upon this case is, that, however fortunate the result of this treatment might have been, we conceive few Englishmen would have survived it.

Nine other cases, equally wonderful in their symptoms and success, follow the above relation; but we may be excused from entering more particularly into their details, since our author mentions the leading circumstances of them when detailing the results of his practice in these fevers, and which he does in substance as follows:—

Passing by his comments on the case we have detailed at length, we come to the second case, which, he says, affords a proof that the remittent fever attended with syncope (*fièvre syncopale remittente*), coming on in a patient labouring under anasarca, with jaundice and enlargement of the liver, recognisable by the touch, at the period of the cessation of the menses, was cured by the bark in large doses, mixed with water; to each dose of which one drachm of the acetate of ammonia (*spiritus mindereri*) was added, not on account of its febrifuge qualities, but as a diuretic.

The succeeding cases, until we arrive at the tenth, go to prove that the presence neither of rheumatism nor gout is sufficient reason for abstaining from the bark, in cases otherwise calling for its exhibition; and we have nothing to say against this general doctrine, though we might be disposed to contest its particular application in some of the examples the Baron has adduced; but, as they all recovered, (which is the goal to which every medical man strives to bring his patient,) we have not the courage to protest against a line of practice attended by such happy results. Nevertheless, we were somewhat startled to find

that neither a threatening of hydrothorax, attended with the greatest difficulty of breathing in one case, nor a teasing cough, giving suspicion of an affection of the lungs, with something very like hectic fever in another, prevented our author from having immediate recourse to this remedy, which he not only prescribes by the mouth, but also administers in *lavemens*; and, whenever he intends to make sure work of it, it is generally combined with drachm doses of the spirit of *mindererus*.

M. Portal concludes this memoir by adroitly hoping that the new salts of bark may be found as efficacious as they are reported to be; but, with the caution of age, he withholds his belief until this shall be confirmed by a long experience of their effects.

The second memoir treats of *those inflammations of the intestines which succeed to diseases of the liver*. M. Portal remarks, that, although enteritis has been a disease acknowledged in all ages to be frequently met with, yet there were never known so many examples of it as at the present time. This he believes to arise in consequence of practitioners not making a proper distinction between those intestinal inflammations which are really idiopathic, and those which are consecutive upon diseases of other organs; a distinction which it is really useful to make, because they, in fact, require a different mode of treatment: to explain this difference is the object of the present paper.

The remarks which usher in the cases detailed by our author in illustration of this position, appear to be a covert attack upon the Broussaisian doctrines. The following paragraph is, we think, decisive upon this point:—"We fall," he says, "into great error if we deceive ourselves in this respect, (namely, whether the inflammation is immediately excited in the intestines, or secondarily from the lesions of other organs:) these errors are as pernicious as those which we commit when we attribute to the stomach diseases which reside in the liver." And again, in the next page:—"Besides," he continues, "since the time of Ferrein, the seat of fevers called gastric has been fixed in the stomach, although, in fact, they exist principally in the liver and the bile." (P. 54.)

Our author, then, in order to demonstrate the influence which the liver exercises over the intestines, refers, first, to the communication of nerves and vessels between those parts: secondly, to the juxta-position of the gall-bladder with the colon, as well as their union by duplicatures of the peritoneum; thirdly, to the communication of the liver, by means of the ductus coledochus, with the duodenum. How often it happens, he adds, that patients complain of violent pains in the umbilical region, the cause of which one would scarcely believe to exist in the

liver, though that is the real seat, although there is neither jaundice nor any painful sensation in the region of that viscus; and such painful feelings have been accordingly attributed, falsely, to worms, to chronic inflammation of the bowels, or to other diseases which have been believed to have existed in them. In order to give our readers a specimen of our author's meaning, as well as his practice, we translate the following case.

A shopkeeper, in the street of St. Denis, had suffered frequently, and for a long time, such severe pains in the umbilical region, that an inflammation of the bowels was apprehended. She was about thirty years of age, of a strong constitution, but menstruated irregularly. Leeches were applied to the anus at one of the menstrual periods, which was imperfectly marked. She took some warm baths, together with some soap pills and light bitters, with infusion of orange and chamomile. She got well. After the lapse of a few months, however, she was assailed by fresh pains, and, without previous bleeding, aloetic pills and very heating drinks were recommended. The menses became suppressed, and all the signs of enteritis took place. Called to her assistance at this period, I caused her (says the Baron,) to be bled in the foot, and ordered relaxing drinks and warm baths, and afterwards the waters of Vichy. The menses re-appeared, the belly became relaxed; bilious stools ensued, and the patient was perfectly cured.

We must beg here to observe, that we do not see how the above case bears upon the point in question, or how it was well possible to make any mistake as to its real nature. The next case is still less obscure.

A man of a robust habit of body and bilious temperament, about forty years of age, applied to our author, complaining of violent pains in the belly, principally about the umbilical region. These pains had succeeded to nausea and vomiting of very bitter yellow matter, which had taken place the evening before, after a hearty dinner; though the same thing had frequently happened before, when he had not eaten much. The Baron examined the abdomen: the umbilical region was rather tumefied, the liver prominent under the edges of the ribs, and rather painful in the epigastrium. The patient's eyes were rather yellow, and his skin had the same tint. He said that he had often been more yellow; that his urine was sometimes as high coloured as blood, and his evacuations had been bilious. With these facts before him, the Baron pronounced his disease to be in the liver, and that the pains in the abdomen were only hepatic colic; but the patient could not be convinced, as he believed that he had taken poison. However, the Baron ordered him some leeches to the anus, some soap pills, with bitter extracts, warm baths, and the water of Vichy.

Our author heard no more of this patient for some months, when he returned to him labouring under the same symptoms, and confessing that he had employed many remedies, under the belief that he was threatened with inflammation of the intestines. He was ordered to have leeches applied to the anus, and not to the umbilical region, (this

is the author's own distinction ;) the soap pills, with the bitter extracts, were again prescribed, only now they were made *un peu aloétiques*; and afterwards the waters of Vichy. These remedies were attended with such success, that in about four months the patient returned to visit the Doctor, in a much improved state of health, as well as of mind. The same treatment was continued for some months longer, and he was radically cured.

These observations, which may at first sight appear trifling, become of importance when it is considered that we are here presenting our readers with the practice of one of the most eminent of the Parisian physicians, whose commentary upon the above case is this:—That there can be no doubt but that the pains in the bowels of this patient would have augmented, and that enteritis would have at length ensued, if he had not followed the Baron's advice; and even with more speed, if a stimulating plan had been adopted. To us the only wonder is, that the Baron's advice produced any effect at all.

After two or three other examples, equally precious, of enteritis following disease of the liver, our author proceeds to that which frequently succeeds to cholera morbus, or the iliac passion, as well as to some dysenteries, and which are owing to an alteration in the biliary secretion. Of this disease the Baron gives but one example, in the person of Mr. Madison, secretary to the English embassy at Paris at the peace of Amiens; but he does not tell us how we are to distinguish this fever from pure inflammation of the intestines; nor does he say one word as to any peculiar mode of treating it.

With respect to that species of enteritis which sometimes comes on during the progress of typhous fever, and which he equally conceives to originate in a deranged condition of the liver, he observes that, though practitioners have neither remarked the particular symptoms during life, nor the changes that they might have observed in that organ after death, he does not doubt that, if they had observed them, they would have been perfectly convinced of the truth of his doctrine: and he affirms that, in persons who die of typhus, where the intestines appear inflamed, the liver is almost always swollen, hard in some parts, sometimes softer than natural, and of a very dark colour, its blood-vessels loaded, and the gall-bladder full of black bile; although the small intestines, and even the stomach, may likewise be found containing a greater or less quantity. Nevertheless, he admits that, where the intestines are not at all diseased, the liver is found very much changed.

Our author has yet to speak of another form of enteritis connected with diseased liver, which attacks those persons who are affected with dilatation of the heart. The explanation of this effect is thus given:—The circulation of the blood in the

vessels of the liver not being carried on freely in these individuals, because the hepatic veins cannot empty their contents into the right auricle, which itself contains too great a quantity, the liver is more and more overwhelmed with blood, and swells; at the same time the course of the bile is impeded, jaundice comes on; there is flatulence, abdominal pains especially in the navel,—and the pulse is hard and full. Every thing announces an enteritis, when, at the same time, the body often swells generally, but sometimes only the lower extremities, either from a collection of air or of water. One case of this kind is given, the only memorable point of which is, that the Baron was called into consultation with *seven* other physicians; and no wonder, therefore, that they were unable to decide upon the nature of the disease until the patient gave them an opportunity of ascertaining the fact of a very great dilatation of the ventricles of the heart, by dying, after a few months of ineffectual treatment.

The results to be obtained from this memoir are, 1st. That primitive inflammations of the intestines ought to be distinguished from consecutive, especially from those following disease of the liver, both on account of the prognostic to be given, and the treatment to be adopted. 2d. That these inflammations from affections of the liver are accompanied by symptoms which indicate those affections, such as jaundice, high-coloured urine, and others so obvious that we need not repeat them. 3dly. That those which are met with in typhus fever from the above cause are remarkable by the prostration of strength, by coma, often united with delirium, and by the state of the pulse, which is more unequal and less hard than in true enteritis. With regard to the mode of treating these diseases, we abstain from giving the Baron's rules; in the first place, because the case we have recorded explains sufficiently his method of practice, and again, because we do not think that the detail would afford either instruction or amusement to our readers.

The subject of what Mr. Portal calls Pneumatie, or Collections of Gas, occupies no less than 267 pages of the volume, and it commences with General Remarks upon Gases. These are ushered in by the following announcement:—"All the parts of our bodies contain gas or air more or less elastic, and other fluids, which do not possess the same degree of elasticity. In the healthy state, these fluids fulfil offices which are necessary to our well-being; in a state of disease, they may occasion different ill effects, according as they are vitiated either in quantity or quality."

We are then informed, that gases are divisible into three sections—1. Those that are respirable; 2. Those that are merely non-respirable; 3. And those that are deleterious, either by the irritation they occasion, or from any other cause. Upon

these different gases, our author makes a few very general remarks, which are not worth repeating, and then proceeds thus: "To convince ourselves that in the healthy state gases exist in the mass of our fluids, it is sufficient to take away from a living animal a portion of a vessel filled with blood, after having tied both extremities, and to place it under the receiver of an air-pump; and, in proportion as the air is exhausted, it will be seen to tumefy. This can only be attributed to a diminution in the pressure of the atmosphere, so that the air contained in the vessel, being no longer compressed, is augmented in volume; its globules, which were scarcely apparent, unite one to the other; from whence it results, that the red globules of the blood are separated from each other, and, then troubling the circulation more and more, they at length change their nature, and are more or less disposed to be converted into water (page 96): the result of this is said to be a slower circulation of the mass of the fluids, from which numerous diseases, and even death itself, ensue. How many apoplexies, epilepsies, palsies, fevers, and other diseases, (exclaims our author,) which appear to us to differ in their symptoms, are nevertheless the inevitable consequence of the above cause; for it is not to be doubted that the air more or less vitiated penetrates, or is developed, much oftener than is thought of in our vessels, and causes divers diseases of greater or less severity. These gases penetrate our bodies by means of respiration, with our aliments, or by the skin; and in a state of health, after having fulfilled those uses in the animal economy prescribed by nature, they are exhaled either in expiration, or by the excretory pores of the skin, as well as in the other excretions.

We now arrive at our author's reasons for preferring the word *Pneumatie* to *Emphysema*, and then have the following definition of the disease:—It consists in a slight soft elastic swelling, formed by gas or air collected in the cellular tissue of every part of the body, in its different vessels and cavities; if the disease is exterior, the swelling quickly returns, after compression, to render a sound not unlike that of a drum, whence arises the term *tympanitis*, given to one species. It may be either general or partial, and differs from *dropsy* in not affording the sense of weight usually felt in that complaint, as well as not preserving the impression made by pressing upon the swelling for the same length of time: however, gaseous swellings are sometimes extremely hard, and occasionally they disappear by the mere efforts of nature. They have been mistaken also for abscess, and opened with the lancet; they have, from their pulsation, been also mistaken for aneurism; and numerous diseases, says Mr. Portal, attended with coma and convulsions, have been caused by gases, which have been recognized, upon

opening of bodies, either in the brain, the spinal marrow, the lungs, heart, stomach, liver, &c. the nature of which was not understood. For examples of this kind we are referred to Morgagni, Lieutaud, &c. Of the causes of this class of diseases not a word is said in any way satisfactory, but the following species are enumerated:—

1. The Pneumatie, which proceeds from excess or deficiency of evacuations.
2. From fevers.
3. From plethora.
4. From inflammation, and its consequences.
5. From different morbid affections, with or without fever.
6. From excessive eating, from bad food, or poisons, &c.
7. From pains; such as dentition, worms, wounds, contusions, &c.
8. From swellings or tumors, and different obstructions, and sometimes terminating in suppuration.
9. From what precedes, accompanies, or succeeds to convulsive, spasmodic, comatose, or paralytic attacks.
- And 10. From artifice or imposition.

From this long list of species, it will be perceived that we have work enough upon our hands, without indulging much in our critical vein; nevertheless, whilst we have the opportunity, we may as well here observe, that if Pneumatie is likely to follow all the different conditions which our author says will frequently produce it, we scarcely know who is to escape. Another more serious defect attaches to the first species, for we are not informed as to the mode of recognising the disease, nor, excepting in one instance, how we are to treat it; so that we are left rather in a worse condition than if we had remained in happy ignorance of the existence of these formidable complaints. But our author shall speak for himself: nothing is more common, he observes, than to see gaseous swellings arise in those who have suffered from considerable evacuations, either by the skin, by urine, or stool, or even from salivation, or leuchorœa, but more particularly after great losses of blood, though it is not always possible to appreciate the danger from the mere quantity of blood lost, as so much will depend upon the constitution of the individual. Those labouring under phthisis, we are told, are only affected with Pneumatie after severe sweats, or colloquative diarrhœa. These emphysematous swellings also, according to M. Portal, are no less common after wounds, after excessive loss of blood, even from the application of too many leeches; and we are especially told, that after bleeding, too often repeated, collections of gas have been met with in the brain, and other organs. Finally, these gaseous swellings also appear with greater or less rapidity in the veins,

after other evacuations, by vomit, purgings, &c. ; and it disappears only in proportion as the losses, with regard to quantity, are repaired either by the efforts of nature or the assistance of art. This remark leads our author to dilate a little upon the necessity of giving nourishing diet and appropriate tonics in those persons exhausted by excessive evacuations ; and thus ends the chapter on Pneumatie from excess of evacuations : so that, as we before said, we are neither told how to recognize it when we find it, and still less how to treat it. But we believe, from the internal evidence afforded by some of the cases recorded, that, after all, a great majority of these gaseous swellings are nothing more or less than œdema.

Next in order comes an enumeration of the cases of Pneumatie produced by defective evacuations, such as those of the skin, urine, and fæces ; the suppression of the lochiæ in women in child-bed ; that of the hæmorrhoidal flux, or of habitual bleedings at the nose, or of ptyalism. The same thing also happens from the cessation of morbid discharges, such as occur in diarrhœa, dysentery, and even of the bile itself, which, independently of its uses in digestion, acts the part (according to M. Portal) of preventing and restraining the expansion of gases so frequent in those persons in whom the bile does not flow in sufficient quantity. In addition to all these causes of the disease, we must not omit to mention the suppression of certain cutaneous eruptions, of the discharge from some kinds of ulcers, which have the effect of issues in preserving the health. Among all these varieties, the Pneumatie from suppressed transpiration, we are told, is the most common : sometimes there is only a puffiness of the face, hands, or feet ; sometimes it affects one-half of the body, either longitudinally or transversely ; sometimes it attacks the whole body, exteriorly as well as interiorly. Of the above effects, M. Portal offers some examples, which we have been in the habit of considering as œdema, especially those swellings sometimes consequent upon the application of blisters ; and we are still of the same opinion, —for our author himself, after saying that they are *veritablement* formed of air, observes that they are very often replaced by œdema ; and in another place, in detailing the case of a lady affected with Pneumatie from using cosmetic baths, we are informed that the termination of the disorder was a fatal dropsy.

Now, respecting the treatment of these cases, our author gets rid of this part of his subject very happily, by observing, that we must restore those evacuations which have been suppressed, and that this cannot be done unless we know how to prescribe appropriate remedies ; and, finally, that it would be possible to make most important remarks upon this subject,

which however he dismisses, most provokingly, without making any remarks at all.

The length to which this article has already extended, obliges us to notice some of the succeeding species of Pneumatie very cursorily. In that which is said to arise from fevers, we are told that it may occur in typhus, in remittent or intermittent fevers: of this latter species, two examples are recorded. On emphysema from plethora, M. Portal does not say much; but he relates one or two cases, which appear to us to be misplaced; take the following example:—

The Abbé Medale was seized with a general Pneumatie: he was of a strong constitution, fifty-five years of age, and very irritable. He complained of severe colics, for which carminatives had been prescribed, not only without success, but actually with an aggravation of the complaint; the abdomen swelled suddenly, and was sonorous when struck upon. The patient also complained of hearing noises in the belly when he moved, or even upon breathing deeply; the epigastric region was especially tumefied after the slightest repast, and the breathing was so disturbed, that suffocation was dreaded. It was thought that there was air in the chest. In this state, M. Portal was called in, who was apprehensive of anasarca, as the ankles were rather œdematous, but the urine was not diminished in quantity, and was free from sediment. Instead of warm diuretics, which the Abbé was taking, our author, as usual, ordered leeches to the anus, with chicken-broth, in which the leaves of pillitory of the wall were lightly boiled, and some cheroil afterwards infused, with the addition of ten grains of nitre to a chopine of the liquid. Under this treatment the patient was reduced exceedingly; then he drank asses milk, and got well, contrary to all expectation.

We do not know how our readers may feel, but we are heartily tired of recording such puerilities; and, with regard to the above case, we cannot help suspecting that this poor oppressed Abbé's case had better have been classed among those cases of Pneumatie arising from excess of eating. The account puts us very much in mind of a *bon vivant*, puffed up with a mass of ill-digested food, overwhelmed with flatulence, and most probably having the large intestines crowded with fæcal matter. As to the threatened danger of suffocation, who has not witnessed something approaching to this from constipated bowels, combined with dyspepsia?

Whether we shall have the courage to encounter M. Portal in a subsequent Number, depends upon too many contingencies to permit us to pledge ourselves either one way or the other.

MEDICAL AND PHYSICAL INTELLIGENCE.

MORBID ANATOMY.

1. *Unusual Conformation of the Nervous System in a Cretin.*—In the *Medicinische Jahrbucher* for 1819, Dr. SCHIFFNER, physician to the Great Civil Hospital of Vienna, related the appearances observed on dissection of a cretin, and which chiefly concerned the nervous system. Since that time, Dr. S. has had occasion to examine the body of another cretin, a brother of the former, and has detailed the particulars in the same work for the year 1821; the appearances very nearly coinciding, we shall content ourselves with giving those of the latter individual, who was thirty-three years of age at the time of his death, the cause of which is not mentioned. The skull cap was unusually thick and heavy. The vessels of the scalp, and the sinuses of the brain, were full of blood. Between the membranes, and in the lateral ventricles of this organ, were several ounces of serum, the cortical substance natural, the medullary somewhat vascular, the convolution of the brain cemented by pretty deep sulci; the thalami optici, the corpora striata, &c. presented nothing unnatural, excepting being somewhat flattened from the compression to which they had been subjected. The four first pairs of nerves exhibited nothing unusual, but the third part of the fifth pair exhibited, in almost all its branches, soon after its separation into branches, ganglia or tubera, the size of garden peas. The only branch of the sixth pair similarly circumstanced, was that which accompanies inferior twig of the vidian nerve into the canalis caroticus; and which formed on either side a ganglion the size of a hazel nut. The portio mollis of the seventh pair was little affected, whereas almost all the branches of the portio dura presented ganglia of the size of peas, and larger. In the eighth pair were only seen some oblong swellings. In the neck, both laryngeal nerves, the branches joining the sympathetic nerve, and several muscular branches, were considerably swollen; in the first, those of the œsophageal, and of the posterior pulmonary plexus, had tubera or ganglia of the size already mentioned, viz. of peas. In the axillary plexus, and particularly in those nervous bundles which give origin to the spiro-muscular nerve, they were of the size of hazel nuts. The other nerves of the plexus, particularly the external and internal cutaneous nerve, were provided with similar swellings; fewer in number, but larger, were the ganglia on the dorsal and lumbar nerves, and the largest of all in the neighbourhood of the crista ilii. The nerves of the inferior extremities exhibited, during their course, several considerable swellings of this kind. The great sympathetic, and its branches, presented nothing unnatural; but its ganglia, in the neighbourhood of the spinal column, had, in several places, attained an unusual size; thus the left sympathetic nerve, opposite to the sixth cervical vertebra, exhibited a ganglion of the size and shape of a hen's egg compressed. These ganglia were an actual degeneration of the medullary substance; they could not be detached from the nerves, nor could the nervous

fibres be traced either around or through them. They were of a pale rose red colour, and were distinguished from the rest of the nervous medullary matter by the medullary globules not being so regularly arranged or strung together, but confusedly mixed. All were provided with nutrient vessels, and were enclosed in a covering of neurilem. These swellings, neither in the present individual, nor in his brother, shewed any tendency to induration or ossification, and occasioned no pain, circumstances distinguishing them from all similar nervous malformations. Perhaps they may throw some light on the nature of cretinism. The fact of two brothers, having the same malformation of the nervous system, with a similar state of intellect, goes far in the opinion of Dr. Schiffner to prove that, instead of looking for the cause of cretinism in the external influences to which the individual is exposed, in the water, in the air, its want of electricity, &c. we are rather to consider the degraded condition as dependent on malformation, originating with the very act of generation,—from the very earliest period of vital life.

2. *Unusually small Heart*.—M. MASSEAU relates the case of a little girl subject to convulsions from her infancy, who died at twelve years of age of epilepsy. On opening the head, nothing remarkable was found, excepting a congestion of blood in the sinuses of the dura mater, and in the vessels of the brain, which was rather softer than usual; but, in the chest, the heart was found to be not larger than a common sized hen's egg, and which was almost entirely made up of the right auricle. The author believes that the right ventricle, not having been able to contain all the blood sent to it from the right auricle, this fluid returned into the vena cava, the jugular veins, and the brain, and thus gave rise to the convulsive attacks. (*Bulletin des Sciences Medicales, Octobre.*)

3. *Tumour of the right Ovary*.—M. VETTU relates the case of a woman, twenty-five years of age, where this disease came on in consequence of a blow on the abdomen; it increased for seventeen years, and, finally, killed the patient at the age of forty-two, having acquired the weight of fifty-six pounds. Its substance was homogenous, greyish, of a cartilaginous consistence, excepting at three points where it was softened, and of a substance similar to the brain; for a long time it had only proved inconvenient by its weight, and it only began to affect the health about three months before the patient died. (*Idem.*)

THERAPEUTICS.

4. *Cupping Glasses to Poisoned Wounds*.—Dr. BARRY, an English physician, read a paper to the Royal Academy of Medicine, relative to some experiments made by him, tending to prove that cupping glasses applied to a poisoned wound prevents the absorption of the venomous matter. The experiments were as follow:—Wounds were made upon the back and thighs of full-grown rabbits, and, when the blood had ceased to flow, two or three grains of strychnia in powder, or two or three drops of hydrocyanic acid, were introduced into the wounds; then, after intervals of three, five, and ten minutes, a cupping glass was

applied to the wound, which was renewed as often as it fell off; no symptoms of poisoning occurred in these animals: but if, on the contrary, this precaution was not taken, they all died. On one occasion, Dr. Barry waited until the animal became affected with convulsions, nevertheless, he succeeded in saving it by these experiments. Dr. Barry, who believes that the circulation of blood in the veins takes place in consequence of an action exercised upon that fluid by the thorax during inspiration, concludes that any circumstance, capable of changing the force of this action from the circumference to the centre in an inverse ratio,—that is, from the centre to the circumference, as is done by the cupping glass, will not only prevent absorption, but will also bring back to the surface the matter already absorbed,—as long, at least, as it remains within the influence of this action. (*Archives Generales*, Sept.)

At a subsequent meeting, M. ADELON read a report of M. LAENNEC upon the experiments of Dr. BARRY, the results of which have been verified:—a cupping glass having been applied upon a wound into which some stychnia in powder had been placed, prevented the effects of this substance from manifesting themselves, and also suspended them when beginning to be apparent, and consequently appear to have prevented the absorption of the poison. The experiments of Dr. Barry have not only been confirmed by repetition, but others have been performed with the white oxyde of arsenic, hydrocyanic acid, and the upas tieuté.

1. Eight grains of white arsenic were introduced into a wound made in the thigh of a dog, three quarters of an hour after a cupping glass was applied to the wound, and kept on for four hours, and the animal suffered no inconvenience. Another dog under the same circumstances, where the cupping glass was not applied, died at the end of fifteen hours.

2. Six drops of hydrocyanic acid were poured into a little wound made in the thigh of a rabbit, the cupping glass was applied for twelve minutes, and the animal shewed no signs of having been poisoned; but when it was taken away convulsions came on so suddenly that it was thought to be dead, but a fresh application of the cupping glass restored it to its former state of tranquillity; the same effects ensued upon removing it again, and it was only after half an hour after the introduction of the poison that it could be removed with impunity. Another rabbit, treated with the same quantity of acid, where no cupping glass was used, died in two minutes. The results of trials made with a grain of the Upas Tieuté were in all respects similar. Dr. Barry concludes that the cessation of the symptoms of poisoning from the application of the cupping glasses, arising in consequence of that portion of the poison which has been absorbed being recalled to the wound and taken out of the circulation,—a position which is combated by M. Segalas, who believes that the cupping glass only acts by preventing the absorption of any new quantity of the poison, and that the portion which has penetrated ceases to act because it is rejected by the different excretions. (*Archives Generales*, Octobre.)

5. *Cauterization of the Pustules of the Small Pox.*—We formerly mentioned that a very warm discussion upon this subject has been going on

in Paris, from which it appears that many practitioners altogether deny the utility of this plan, urging that the pustules continue their progress commonly under the eschar, and in spite of it; whilst others go beyond this, and say that cerebral inflammation is too often the consequence of this method. The claim of priority in the use of caustic is contested between MM. SERRES and BRETONNEAU; but it appears that there is a decided difference in the manner of employing the remedy between those gentlemen. M. Serres uses a solution of lunar caustic in water, of from twenty to thirty-five grains to the ounce, with which the pustules are washed; whilst M. Bretonneau applies the solid caustic to each pustule separately, after opening them with a lancet. It appears further, from the observations of M. GAZO, that this plan is only successful when adopted immediately upon the appearance of the pustules; after the fourth day, they will continue their progress uninfluenced by the application. (*Revue Medicale*, Octobre.)

6. *Effects of Iodine*.—M. LOCHER-BALBER has published several cases, in which the good effects of the above medicine were demonstrated. The first case is that of a woman, twenty-five years of age, who, otherwise of a good constitution, was subject at each period of menstruation to violent head-aches, so as to be obliged to keep her bed; sometimes violent pains in the teeth, or bowels, occurred instead of head-ache. After taking half an ounce of the tincture of iodine, (the dose is not mentioned,) she was freed of all her ailments, and the menses have subsequently been quite regular, and not preceded by any painful affection. The second and third cases are so far similar, inasmuch as they relate to symptoms dependent upon menstruation, and they equally yielded to the tincture of iodine. Three other cases are recorded of enlarged lymphatic glands, in one the external and internal use of iodine produced no effect on the disease, in the other two cases a cure was effected. M. Locher-Balber finally relates the following case:—A child, six years of age, affected with tinea for a long time, had enlarged glands of the neck, the least of which were as large as a nut. Five drops of tincture of iodine were given three times a-day, the swelling of the glands diminished considerably, and the tinea was radically cured. The medicine was obliged to be withheld sometimes, because it occasioned, after a certain period, a feeling of great heat in the stomach: the patient was removed from the author's care, and therefore he does not know the termination of the case. Other cases relate to the ill effects of the tincture of iodine; and in one instance a general emaciation ensued, and the remedy was abandoned. (*Ibid.*)

7. *Muriate of Gold in Syphilis*.—Dr. GUSTAVUS BENABEN has published some cases of the above disease cured by the muriate of gold. He precedes the relation of these cases by reminding us that these remedies are as ancient as the year 1540, and that they have been recommended at various periods down to the time of Dr. CHRETIEN, whose preparation, viz. the muriate of gold and soda, is employed by the author. We only quote him in order to inform such of our readers as are disposed to put this remedy to the test of experience, that it is

usually employed in frictions on the tongue, beginning with the fourteenth part of a grain, and gradually increasing it to the eighth; sometimes it is also administered in very minute doses internally: copious sweats, or a great flow of urine, are the effects of the medicine on the animal economy. The quantity required for the use of secondary symptoms appears to have been from six to twelve grains. (*Ibid.*)

SURGERY.

8. *Calculus in the Urethra*.—M. BOULU relates the following case:—A boy, five years of age, had, for two years, experienced slight attacks of hæmaturia, which were frequently renewed: there was, however, no other symptom denoting the presence of calculus; there was no pain in the bladder, nor whilst passing the water, nor even when there was a discharge of blood. His parents, however, were uneasy at this circumstance, and medical means were resorted to, without effect. In the night of the 7th of May, he was suddenly attacked by retention of urine; and, on the following morning, Dr. Boulu was called to see the patient. He was in a state of extreme suffering, making forcible, but useless, efforts to pass urine; the belly swollen; the face flushed, with a good deal of heat and fever. The introduction of the catheter was, of course, the first thing that appeared necessary to be done; but the child screamed so violently when the attempt was made, that his parents begged the Doctor to desist. Yielding with regret to their solicitations, the warm bath, with fomentations and enemata, were prescribed.

At eight o'clock in the evening, the Doctor was again sent for. None of the above means, though rigidly followed, had been attended with any good effect. The boy was senseless, and affected by convulsions, with but little interval between each; the belly was enormously distended; and, upon making an attempt to pass the catheter, it was stopped by some foreign body: the extraction of this substance, which was considered to be a calculus, was therefore inevitable; and, as M. Boulu had neither the forceps of Hunter nor Maigny at hand, instead of losing time in endeavouring to procure these instruments, he made an incision into the urethra, drawing the skin towards the glans, to prevent this incision being parallel with that in the urethra. This first incision was five lines in length, and only included the skin. The edges being separated, the urethra was opened a little obliquely, and a calculus extracted: a little blood escaped. The child recovered from its state of insensibility during the operation; and, as soon as the stone was removed, a quantity of urine escaped, first of a red colour: latterly a little escaped by the wound, which was dressed simply, without the introduction of any catheter.

The next day, every thing went on well: much urine had passed through the penis, and very little by the wound. On the third day, all danger had disappeared: not a drop of water escaped by the wound, which is now entirely healed. (*Ibid.*)

MISCELLANEOUS.

9. *Society for the Diffusion of Obstetrical Knowledge.*—It is proposed to establish a "Society for the Diffusion of Obstetrical Knowledge."

The Society to consist of all denominations of medical practitioners resident in Great Britain, whether physicians, surgeons, or apothecaries, legally authorised to practise as such, who exercise or have exercised the art of midwifery. The number to be limited to 500, and to be divided into two classes, of resident and non-resident members.

The management of the Society to be vested in one president, two vice-presidents, one treasurer, a directing committee of ten, and a conservator of the museum, who shall act also as librarian.

All members to pay three guineas on their admission; and the annual subscription to be two guineas for the resident, and one guinea for the non-resident members.

The Society to have a house in a central part of the town; with a museum and library, open all the year round for a certain number of hours daily, at which members may attend to consult books, write, or converse together in the manner of the best clubs.

The instructions and orders of the officers and committee to be executed by an honorary and a stipendiary secretary; the latter of whom shall also be sub-conservator and sub-librarian, and shall reside in the house.

The members to present a book or books, whether modern or ancient, on subjects of medicine, particularly midwifery, or their own works, for the purpose of forming a library; and also all such preparations of healthy or morbid anatomy, illustrative of the different branches of obstetrical science, as they may be able to spare.

An ordinary general meeting of the members to take place every Monday evening, at eight o'clock during the months of November, December, January, February, March, and April, for the purpose of discussing obstetrical subjects, and conducting the ordinary affairs of the Society. An anniversary general meeting to be held on the first Monday in April, for the election of officers, and for receiving the committee's and treasurer's Reports.

Two prizes, value twenty-five guineas each, to be funded, for the best papers on subjects of obstetrical science, and its various branches: the prizes to be distributed by the president at the anniversary general meeting.

A Bulletin of the proceedings of the Society, drawn up in an instructive form, and in the manner of the Scientific Gazette, with occasional wood-cuts and lithographic engravings, to be published on the first of every month, while the ordinary meetings are held, and distributed gratuitously to the contributing resident and non-resident members.

The principal objects of the Society to be—1. To promote the diffusion of obstetrical knowledge. 2. To encourage public and private schools of midwifery. 3. To procure some legislative enactment, to regulate the practice of midwifery in Great Britain. 4. To form a plan for the gradual education of a certain number of respectable females, to practise as midwives in those parts of the country where male practi-

tioners cannot be procured. 5. To suggest to the public the best method of securing protection and a proper treatment to the children of those females who go out as wet nurses, by forming an establishment for the temporary reception of such children.

* * We understand that a meeting has taken place, and that some of the leading practitioners in midwifery have signified their intention of becoming members of this Society.—EDITORS.

10. *Note from DR. ELLIOTSON to DR. MACLEOD, respecting the Carbonate of Iron.*

Dear Sir,—Accept my best thanks for pointing out, in the last number of your Journal, an error which I have committed in my paper upon the Subcarbonate of Iron, with respect to the largest quantity of that medicine exhibited by Mr. Hutchinson. I stated that the largest quantity found necessary by him is four scruples and a half in the twenty-four hours, and concluded that this was the largest quantity he ever employed; whereas, by consulting his work, I find that he gave three or four scruples twice a-day. Even by consulting my own note-book, in which I make abstracts of the books I read, I find written, “The largest quantity given by Mr. Hutchinson is four scruples twice a-day.”—How the mistake originated, I cannot imagine, unless from a bad habit of preparing for the press upon loose slips of paper, and a reference to some other medicine and some other author having slipped among my notes upon the Subcarbonate of Iron, and being mistaken by me as referring to Mr. Hutchinson.

The mistake, I must confess, appears to me perfectly immaterial; because if Mr. Hutchinson had been able to cure *Tic douloureux* with three scruples and a half a-day, it would have been a better thing than to cure it with three or four scruples twice a-day; and because the quantity of half an ounce, which I have shewn may be commonly given four or six times in the twenty-four hours, is equally unexpected whether three scruples and a half had been given by others in the twenty-four hours, or four scruples twice in that time.

That my error was unintentional, must appear not only from these circumstances, but from my having said in the same sentence, that some practitioners give a drachm three times a-day; (“the ordinary dose is from fifteen to thirty grains two or three times in the twenty-four hours, but some practitioners occasionally give a drachm,”) which is a scruple more than Mr. Hutchinson ever found it necessary to exhibit. Still I have committed an error, and regret it. There is no necessity for me to remark how much the profession and society are indebted to Mr. Hutchinson for his discovery of the utility of the Subcarbonate of Iron in *Tic douloureux*; and I have expressly declared in my paper, that I should not have thought of exhibiting it in *Chorea* and *Paralysis agitans*, but for its utility in *Tic douloureux*.

I beg you will make whatever use you think proper of this note; and, indeed, you could not oblige me more than by giving it a place in your next number.—I remain, dear Sir, your's faithfully,

Grafton-street, Dec. 3, 1825.

J. ELLIOTSON.

P.S.—The edition consulted by me of Mr. Hutchinson's work is the first: I have been unable to procure the second.

A LIST
OF THE MOST IMPORTANT
WORKS, ESSAYS, CASES, AND FACTS,
CONNECTED WITH MEDICAL SCIENCE,
*Which have either been originally published in this Country or noticed
in the Medical Journals, during the year 1825;*
ARRANGED ACCORDING TO SUBJECTS.*

ANATOMY, *in general.*

Elements of the Anatomy of the Human Body, in its sound State, &c. &c.; by Dr. A. Munro.—Reviewed in the Edinburgh Medical and Surgical Journal, No. lxxxv.

Manuel d'Anatomie Generale, Descriptive et Pathologique, par Prof. Meckel; traduit et augmentée par A. J. L. Jourdan et Prof. Breschet.—Reviewed in this Journal, March, April, May, and June.

Introductory Lectures on Anatomy, by Dr. Baillie. (Printed, but not published.) London, 1825.

A System of Anatomical Plates, by Mr. Lizars, up to Part VIII. Edinburgh.

A Course of Dissections for the use of Students, by Mr. H. Mayo. London, 1825.

A Manual of Anatomy, by Dr. W. Bennett. Edinburgh, 1825.

Anatomy of particular Parts.

Illustrations of the Arteries connected with Aneurism and Surgical Operations, by Mr. Dermott. London, 1825.

Surgical Anatomy of the Arteries of the Human Body, by Mr. Harrison. Dublin, 1825.

Anatomie du Cerveau, contenant l'Histoire de son Developpement dans le Fœtus, &c. par F. Tiedemann; traduit de l'Allemand, par A. J. L. Jourdan.—Reviewed in Edinburgh Medical and Surg. Journal, January; and translated into English by Dr. Bennett, Edinburgh.

On the Ligaments of the Human Ossicula Auditus, by Mr. Chevalier.—Medico-Chirurgical Transactions, vol. xiii. part i.

On Ligaments, by Mr. B. Cooper. London.

A Short Description of the Bones, &c. by Mr. South. London, 1825.

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* We have adopted the above-mentioned limitations, as extending the list to the productions of foreign countries would have rendered it greatly more extensive. We do not profess to have enumerated *all* the Works or Cases which have been published, but trust that the *most important* will be found in our selection. Where a work has been reviewed in various Journals, or a fact mentioned, we have endeavoured to give reference to these according to the dates of their appearance; and, where any omission may be found, we request the respective Authors and Editors to believe that it has resulted from oversight, not design.—
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- Abdominal Hernia.—*Id.* September 17.
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- Encysted Hernia of the Tunica Vaginalis.—*Idem.*
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- Penetrating Wound of the Chest, by M. Toulmouche.—*Revue Medicale*, Mars; *Lancet*, June 4.
- Fractured Spine.—*Lancet*, June 4.
- Stricture of the Œsophagus.—*Id.* June 18.
- Retention of Urine, in which the Bladder was punctured.—*Id.* October 29.
- Cases of Retention of Urine, with Extravasation.—*Idem*, July 23, Sept. 10, October 15, November 26.
- Case of Compound Fracture of the Tibia and Fibula.—*Idem*, Sept. 3.
- — — — — *Idem*, October 15.
- Amputation at the Shoulder-joint.—*Idem*, September 10.
- diffused Aneurism of the Thigh.—*Idem.*
- Extirpation of the Uterus, by M. Laud Wolff.—*Gräfe and Walther's Journal*; *Lancet*, October 22.
- Fatal Injury of the Head.—*Lancet*, October 29.
- Compound Fracture of the Leg.—*Idem.*
- — — — — *Idem*, November 5.
- Dislocation of the Ankle-joint.—*Idem.*
- Permanent Contraction of the Fore-arm succeeding Venesection.—*Idem.*
- Fracture of the Os Frontis and Bones of the Face; Rupture of the Abdominal Muscles.—*Idem.*
- apparently slight Injury of the Head, which proved fatal at the end of three weeks.—*Idem*, December 10.
- Hemorrhage following Amputation.—*Idem.*

MIDWIFERY.

- Elements of Operative Midwifery, with a Description of certain new and improved Powers for assisting difficult and dangerous Labours, by Dr. D. D. Davis.—Reviewed in *Lancet*, July 30, Aug. 13; *Anderson's Journal*, Oct.
- A Compendious System of Midwifery, by Dr. Dewees.—Reviewed in this *Journal*, July and August.
- Obstetric Studies; comprehending a Treatise on Parturition, &c., by Mr. James Hogben.

Instructions to Mothers and Nurses on the Management of Children, in health and disease, by Dr. Kennedy.—Analysed in the Med. and Chir. Review, October.

On a new Variety of extra-uterine Pregnancy, by Dr. Gilbert Breschet.—Med.-Chirurgical Transactions, vol. xiii. part i. This Journal, October.

Observations on Transfusion of Blood; with an Account of two Cases of Uterine Hemorrhage in which that Operation has been recently performed with success, by Mr. Waller. London, 1825.

Cursory Observations on Preternatural Presentations, accompanied with a Case of unfrequent occurrence, by Mr. Brown.—Med. Repository, Jan.

On Puerperal Irritability, by Mr. Waller.—This Journal, February.

On the Secale Cornutum, (Cases illustrative of its utility.)—This Journal, July and August.

Case of a Foetus in which the left Foot was separated from the Leg during Utero-gestation, by Mr. Watkinson.—This Journal, July.

—— a Child crying while the Head was still in Utero.—Archives Generales, January. This Journal, March.

—— Rupture of the Perineum, by Mr. Bond.—Medical Repository.

—— Fallopian-tube Pregnancy, by Dr. Elliotson.—Medico-Chirurgical Transactions, vol. xiii. part i. This Journal, October.

—— Rupture of the Uterus, by Dr. Broyles.—Philadelphia Journal, No. 17; Medical Repository, June.

—— Uterine Hemorrhage, in which the Operation of Transfusion was successfully performed, by Mr. Waller.—This Journal, October.

——, by Mr. Doubleday.—Id. Nov.

—— true Uterine Pregnancy, supposed to have lasted upwards of three years, by M. Penker.—Allg. Medic. Annalen, September 1824; Anderson's Quarterly Journal, October 1825.

—— Twins, in which one Child was expelled seventeen days before the other, by Mr. Bush.—This Journal, February.

—— Uterine Hemorrhage, suppressed by large Doses of Nitre.—Bull. de l'Athenée de Medecine; Lancet, May 21.

—— Rupture of the Uterus, with Escape of the Foetus into the Abdominal Cavity, Operation, and Recovery of the Mother, by Dr. L. Frank.—Annali Universali, January and February; Lancet, June 18.

CHEMISTRY AND PHARMACY.

Elements of Medical Chemistry, by Dr. Paris. London, 1825.—Reviewed in this Journal, July; Anderson's Quarterly Journal, July and Oct.

A Popular Explanation of the Elements and General Laws of Chemistry, by Mr. Weldon. London, 1825.

An Attempt to establish the first Principles of Chemistry by Experiment, by Dr. Thomson. London, 1825.

A Manual of Pharmacy, by Mr. Brande. London, 1825.—Analysed in Med. and Chir. Review, July.

Experiments to ascertain how far the presence of Albumen and Muriatic Acid interfere with the action of Protiodide of Mercury and Protomuriate of Tin upon each other, by Dr. Bostock.—Edinburgh Med. and Surgical Journal, No. lxxxii.

Analysis of the Upas Tieute and Upas Antiar.—Idem.

Detection of Hydrocyanic Acid in the bodies of Animals poisoned by it, by M. Laussaigne.—Ann. de Chimie, No. 27; Quarterly Jour. of Science, January; Med. Repository, February.

M. Chansorel's new Chemical Doctrine.—Reviewed in Med. Rep. July.

Academical Examinations on the Principles of Chemistry, by Mr. Reik.—Edinburgh, 1825.

An Essay on the Natural, Chemical, and Medical History of Water; with a List of all the principal Mineral Waters in Europe, by Dr. Ryan.—This Journal, December.

Observations on the Tests for Arsenic, by Dr. Giseke.—Schweigger's Journal, band 13; Philosophical Magazine, October.

Method of detecting Spots of Blood, by M. Lassaigne.—Revue Med. Avril. This Journal, June. Anderson's Quarterly Journal, July.

On the Formation of Hydriodate of Potassa, by Dr. Ed. Turner.—Edinburgh Medical and Surgical Journal, No. lxxxiv.

On the Analysis of Opium, by Mr. T. Jeston.—This Journal, August.

On Pariglina, the alkaline principle obtained from Sarsaparilla.—Lancet, February 5. This Journal, April.

Mr. Donovan's Apparatus for filtering Fluids liable to be injured by exposure to the atmosphere.—Dublin Philosophical Journal, April; Medical Repository, October.

Facts towards the Chemical History of Mercury.—Quarterly Journal of Science, January. This Journal, February.

On the Impurity of the pulverised Emetic Tartar of the shops.—This Journal, July.

On the advantageous Preparation of the Ammoniacal Compounds.—Ann. de Chimie, xxviii.; Quarterly Journal of Science, July.

On a new Preparation of Croton Tiglium, by the late Mr. Pope.—Med.-Chir. Transactions, vol. xiii. part i. This Journal, October.

Opium, new Salt (Codiante of Morphia) discovered in, by M. Robinet; with an account of its effects on animals.—Journal de Chimie, &c. October. This Journal; and Medical Repository, December.

On the Preparation of Morphia, by M. Hottot.—Journal de Pharmacie. This Journal, February.

Remarks upon the active Principle of Belladonna, by M. Runge.—Ann. de Chimie, xxvii. 32. This Journal, February.

Colocynth, by M. Vauquelin.—Journal de Pharmacie. This Journal, February.

Preparation of Lactucarium, by M. Roman.—Revue Medicale, Aout. This Journal, November.

Sulphate of Quina, by M. Caventon.—Archives Generales, Juillet. This Journal, November.

MISCELLANEOUS.

An Essay on Egyptian Mummies, with Observations on the Art of Embalming among the ancient Egyptians, by Dr. Granville.—Philosophical Transactions, 1825. This Journal, August.

Method of preserving Bodies by injecting them with Whiskey, by Dr. Godman.—Philadelphia Journal, No. 18. This Journal, June.

Description of the general Hospital at Munich.—Nye Hygœa. This Journal, July.

On the Principles and Practice of Ventilating and Warming Buildings, by Mr. Tredgold.—Edinburgh Philosophical Journal, January and April.

Observations on Medical Education; being a Review of the Introduction to Dr. Paris's Medical Chemistry.—This Journal, May.

Description of an Hermaphrodite, by Dr. Mayer, of Bonn.—Lancet, October 22.

On future occasions we hope to render our List more complete. Gentlemen desirous of having their works, &c. inserted, are requested to send them to the Publisher.—EDITORS.

METEOROLOGICAL JOURNAL,

By Messrs. WILLIAM HARRIS and Co. 50, Holborn, London.

From November 20 to December 19, 1825.

	MOON.	Rain gauge	THERM.			BAROM.		DE LUC'S HYG.		WIND.		ATMOSPHERIC VARIATIONS.		
			9 A.M.	MAX.	MIN.	9 A.M.	10 P.M.	9 A.M.	10 P.M.	9 A.M.	10 P.M.	9 A.M.	2 P.M.	10 P.M.
Nov														
20			38	43	43	30.06	30.01	80	80	WNW	SW	Fine	Fine	Fine
21			53	53	38	29.68	29.72	85	76	WSW	W	Fine	Rain	
22		.22	40	45	34	29.76	30.02	76	75	WNW	NW		Fine	
23			40	43	47	30.16	30.05	75	90	WSW	WSW			Sleet
24		.04	49	51	41	30.08	29.87	93	95	W	W	Foggy	Rain	Cloud.
25	○		43	46	38	30.14	30.22	84	77	WNW	W	Fine	Fine	Fine
26			45	53	40	29.97	29.63	78	75	SW	SW va.		Rain	Cloud.
27			46	51	50	29.85	29.62	67	85	W	SSW		Fine	Rain
28		.29	44	53	42	29.21	29.08	87	84	SW	SW	Rain		Fine
29			43	53	40	28.90	28.81	78	80	SW	SW	Fine		
30			39	40	32	29.30	29.58	80	78	N	N			
Dec														
1			32	35	38	29.51	29.83	85	77	E	SE var.			
2			44	45	40	28.84	28.96	91	82	W var.	SW	Rain	Cloud.	
3	☾	.71	40	45	39	29.10	29.12	85	85	SW	SW	Fine	Fine	Foggy
4			39	41	33	29.11	29.31	86	85	N	N	Rain	Rain	Fine
5			35	41	44	29.26	29.18	94	95	NE	SSW			Rain
6		.96	46	48	40	29.29	29.24	91	95	SW	ESE	Fine	Fine	Fine
7			43	51	43	29.11	29.21	92	85	E	E			
8			44	45	44	29.27	29.23	92	95	ENE	NE			
9	●		43	45	43	29.30	29.45	92	85	NE	NNE			
10			43	45	42	29.52	29.61	88	85	NW	W			
11			43	46	39	29.64	29.72	87	87	W	WNW			
12			39	42	35	29.75	29.71	91	95	SW	NW	Foggy	Foggy	Foggy
13			35	45	45	29.67	29.57	95	95	WSW	SSW		Fine	Rain
14			47	50	37	29.18	29.16	95	85	SW va.	SW	Rain	Rain	Cloud.
15		.23	37	42	45	29.43	29.66	80	79	W	SW	Fine	Fine	
16			47	50	48	29.68	29.72	75	79	WSW	SW			Fine
17	☾	.27	51	52	45	29.56	29.71	95	90	SW	WSW	Rain		
18			50	52	48	29.54	29.45	88	89	SSW	SSW	Fine		Rain
19		.12	49	49	41	29.24	29.33	88	79	S	SSW	Rain	Cloud.	Fine

The quantity of rain fallen in the month of November,
was 2 inches and 13.100ths.

NOTICE TO CORRESPONDENTS.

The Communications of Mr. JEWEL, Mr. CLAY, Mr. BOYLE, Mr. NORMAN, Mr. BLACKETT, and Dr. STOKER, have been received.

☞ We are compelled to omit the List of Books from want of room.

ERRATA.

In the Index for Chloruret read Chloride.

In the December Number, p. 450, for mineral read mineral waters.

453, for Blombieres read Plombieres.

454, for Selerite read Selenite.

455, for Castlehead read Castlelead.

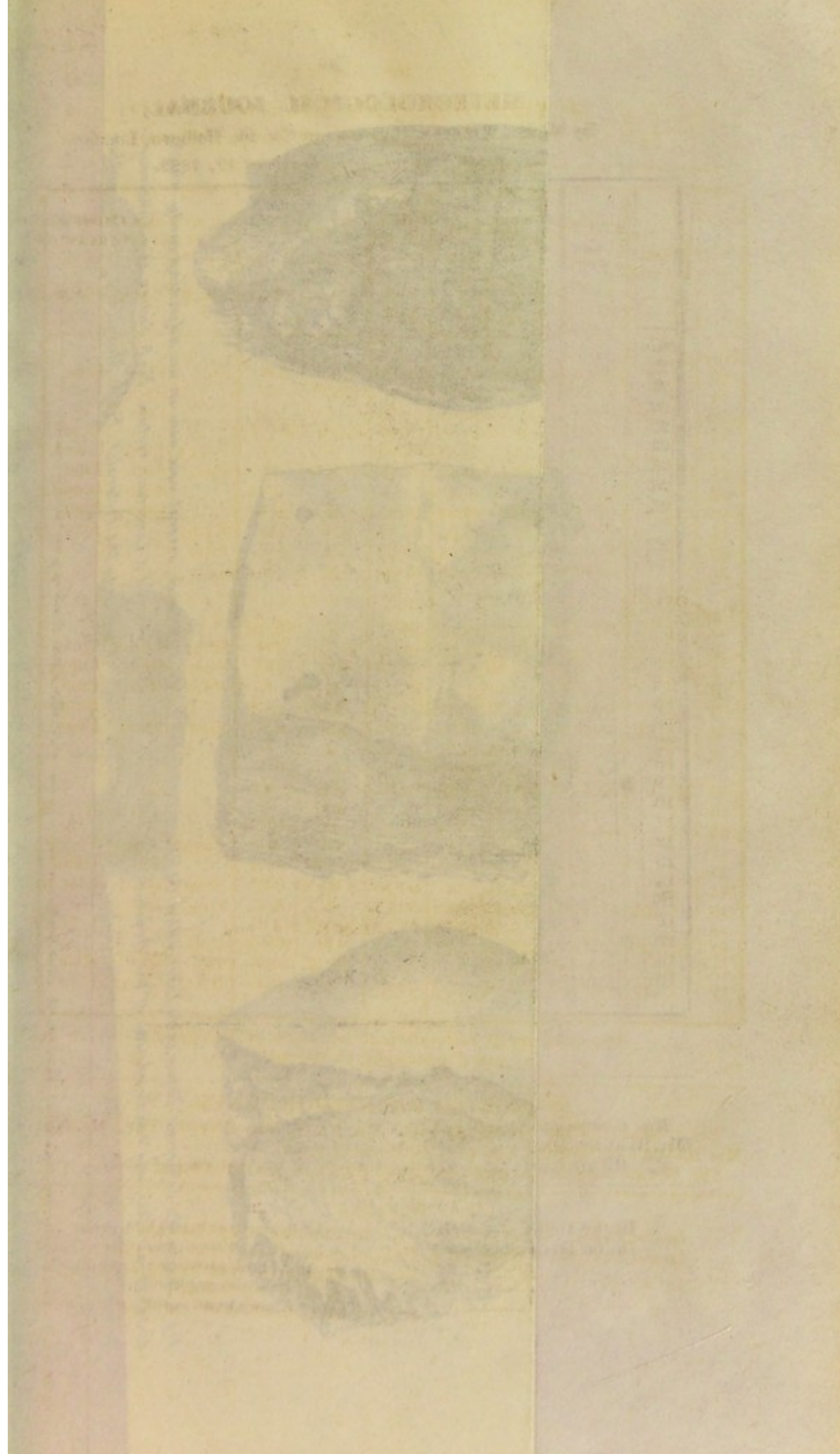


Fig. 3.



Fig. 2.



Fig. 1.

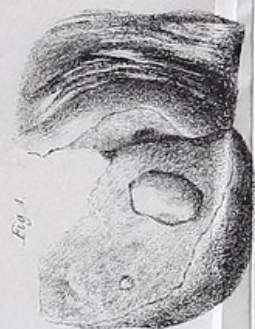


Fig. 4.



Fig. 5.

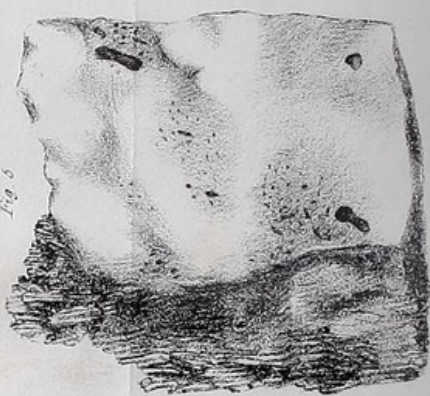


Fig. 6.



Fig. 1. Section of a Sclerous Tumor in the Liver, with a Gallstone embedded in its substance, several more were in an adjoining cavity which contained also Bile, and had its portion of the structure here represented. Fig. 2. Section of a Cancerous rectum. Fig. 3. Section of a Cancerous Pylorus. Fig. 4. Section of a Cancer invading the Glutae. Fig. 5. Medullary sarcoma invading the Prostate. Fig. 6. Medullary sarcoma within the Aponeurosis of the Brachio. Brachio.

THE LONDON
Medical and Physical Journal.

NO. 2 OF VOL. LV.]

FEBRUARY, 1826.

[NO. 324.]

For many fortunate discoveries in medicine, and for the detection of numerous errors, the world is indebted to the rapid circulation of Monthly Journals; and there never existed any work, to which the Faculty, in Europe and America, were under deeper obligations, than to the Medical and Physical Journal of London, now forming a long, but an invaluable, series.—RUSH.

ORIGINAL COMMUNICATIONS,

SELECT OBSERVATIONS, &c.

ART. I.—*General Observations on Morbid Tumors, and on the different Modes in which the Muscular Structure is attacked by Cancer and Medullary Sarcoma.* By THOMAS WM. CHEVALIER, Esq. Consulting Surgeon to the Royal Union Association.

[With an Engraving.]

ONE principal object of this paper is to suggest, for the consideration of the reader, how far the ancient doctrine of final causes may be applied to the classification of disease, and especially to that of morbid tumors. For, from the following view of the progress of those two diseases more particularly considered here, it would appear that that doctrine leads to an easier method of learning and distinguishing them, in their early stages, and in their general characters as described, than can be obtained by paying attention merely, or principally, to the phenomena which either of them successively exhibits.

In the other object which the author had chiefly in view, he is sincerely happy to find that he has been to some extent anticipated by the accurate observations of Mr. Wardrop, which have already induced that gentleman to say, with every requisite confirmation of his words annexed, that “he thinks there are sufficient grounds to consider fungus hæmatodes as a morbid change of structure specifically distinct, and in every point of view, different from cancer.” It is, therefore, hoped that an additional proof of the rectitude of that gentleman’s opinions concerning two maladies hitherto incurable, will not be considered unworthy of the attention of the medical world, nor unwelcome to himself; especially as it consists in a description (which the author believes to be new) of the totally different methods in which one of the essential animal structures is invaded by those two diseases.

Every ultimate produce or effect, in art or nature, implies that some certain specific changes have preceded it, as its

cause; and every intermediate change (that is fully comprehended) denotes that some one individual effect will be produced as its immediate result.

In disease, also, we know the intermediate changes that shall succeed, and the ultimate effect that shall result, from the proper insertion of vaccine, or of variolous, or of syphilitic poison, beneath the rete mucosum; and we know that an incapacity for the small-pox, connected with the appearance of a certain kind of cicatrix, is a proof that certain intermediate changes have been passed through.

It is by that which we know would be the result, that we denominate and distinguish diseases, even in their unfinished, or even in their incipient stages; and when any disease hath attained its perfect form, or acmé, it is its perfect form which determines our opinion of its nature.

The acmé of variola, for example, or its ultimate effect on the constitution, is that to which all its proper progress tends; and for the sake of which inoculation was performed. The termination of cancer is that to which all its stages, from the earliest to the latest, are an approach; not only in reference to time, but also in the kind of action in which they severally consist. And, in short, there is not a disease affecting the animal body which is not to be defined either as a progress or a disposition towards the accomplishment, under certain circumstances, of some specific morbid action; or towards the secretion, under certain circumstances, of some specific animal poison; or towards the produce, under certain circumstances, of some specific growth, "*præter, vel contra naturam.*"

I believe it may be asserted generally, that all tumors which do not tend, from any thing essential to their complete form, to implicate surrounding structures in their own morbid characters, consist of substances analogous to some or other of those naturally existing in the body. Mr. Abernethy has observed of some, that "they have no distinguishable peculiarity;" of others, that "their substance, in colour, texture, and size, resembles the larger masses which compose the pancreas;" and I may add, that even the contents of cysts resemble the blood, or the marrow, the sebaceous or mucous secretions, or that which becomes hair, or (as in some partially ossified cysts in the liver and spleen) the substance which unquestionably is the essence of bone.

Hydatids alone are a tribe of preternatural growths, to the structure of which I can find nothing analogous in the natural and healthy body.

A tumor of these kinds, distinguished as merely *præter naturam*, is never found to engage in its own specific mode of growth, nor to retract into its own substance, nor in any way to

metamorphose or obliterate neighbouring natural parts. It does not contaminate on its approach, though its disposition to grow, and its actual increase, cannot perhaps be checked or prevented.

From the ill consequences of the presence and growth of such a tumor, the muscles, although sometimes expanded into a web of fasciculi,—the arteries and veins, although sometimes distended and tortuous,—and the nerves, although protruded from their usual courses, may rapidly recover: and hence it may be asserted, that the tendency in the nutritious arteries of these swellings to form and to augment them to a certain indefinite extent, appears all that they have of a morbid character.

The growth of a cancerous tumor is frequently less rapid than that of many comparatively innocuous; but it is always more irresistible, and less evidently modified for the accommodation of organs in its vicinity. A cancer will form inconvenient attachments before it has induced inflammatory action. It disgregates the fasciculi of muscles, and even of nerves, more readily, and with more severe symptoms, than a merely preternatural tumor.

The ultimate tendency of a cancerous tumor is not merely to enlarge, but to ulcerate. The structure of a cancerous tumor, if it resemble any ordinary structure, is most like that of the cellular or parenchymatous substances of the body, when either of them is filled and consolidated by the effusion of coagulated lymph in its interstices; or, in other words, when either of them is prepared for ulceration: and, indeed, whatever tumors are not at all disposed to ulcerate, are by common consent distinguished as not cancerous.

What are called *tubercles of the uterus*, for example, (which present, on their cut surface, an appearance not unlike that of the unimpregnated womb itself,) are easily made to exhibit the striæ commonly enough mentioned as a characteristic of the cut surface of a cancerous growth; but, as these tubercles never ulcerate, no one has ever ventured, so far as I know, to include them among the forms of cancer: and, indeed, they are not like the cancerous structure when minutely examined; for we may always see, in the interstices of the striæ of the section of a cancerous growth, minute portions of a peculiar gristly substance interposed; and this is not to be detected in the section of the tubercle of the uterus.

This interposed substance is like lymph, sufficiently hardened to be both soft and brittle: it has been noticed by several authors; and it would appear to be the means whereby a natural structure is prepared for ulceration. I have seen it in every interstice of a schirrous thyroid gland; and I have known, in two instances, the iliacus internus muscle entirely changed into

this or a very similar substance, in patients who died of cancer of the *intestinum rectum*.*

This interposed substance consolidating the *striæ*, and not the simple presence of the *striæ* on a cancerous section, would therefore seem to be the characteristic of the disease; especially as it is observable no where in the natural texture of the body, nor to be any where found in the healthy patient, unless in a surface obviously prepared for ulceration, or in the condensed and ulcerating texture which often surrounds extraneous bodies lodged in the human frame, (*see Plate, fig. 1:*) and hence, indeed, a powerful argument that cancer is, from the very first, a preparative process for malignant ulceration.

In cancerous intestine or stomach, the interposed substance is more abundant than it is in carcinomatous tumors: it is seen composing a much larger proportion of the bulk of the disease (than the *striæ* or fibrous part composes,) in figures 2 and 3 of the Plate.

When cancer, or any other essentially malignant growth, has once commenced its originally destined and destructive mode of action, it becomes a much more virulent contagion in the neighbourhood of those parts among which it is situated, or even infects the whole body with its own original and potential essence: namely, a certain specific disposition in the arteries to form its substance. It would appear, however, so far as the author has observed, that cancer never becomes so malignant as *fungus hæmatodes* in general proves itself to have been. I have seen a preparation of a cancerous tumor which has obliterated every trace of the carotid artery: a considerable nerve, however, passing directly through it, is thickened, but not otherwise altered, as far as can be seen; and, indeed, it is a rare occurrence for cancer to obliterate a large artery, and by no means common for it to attack the muscles: whereas, I have repeatedly seen the muscles attacked by *fungus hæmatodes*; and I have a preparation in my possession of a medullary sarcoma, which has all but opened into the *vena cava ascendans*, so that the pulpy matter is separated from the cavity of the vein merely by an exceedingly fine membrane; and the aorta is corrugated on the other side of the tumor.

The two chief characteristic distinctions between these two kinds of malignant tumors, do not consist, however, in their possessing a different *degree* of malignancy, or of any other morbid character; nor even in any difference of proper structure, how apparent soever; but in their having appropriated to

* In both these instances, the *iliacus internus* muscle was changed into an homogeneous pulpy mass, preserving the external form of the muscle, and having no immediate connexion with the disease of the intestine: it had, however, in both instances corroded the *ala ilii*, and in points begun to ulcerate.

them two distinct terminations, and in their attacking the muscular structure in two distinct ways.

It has been remarked already that cancer terminates in ulceration; and, indeed, wherever the disease arrives at a stage which may be properly called its ultimate result, or *acmè*, it always does so. If life be cut short before ulceration commences, the disease in that case has not properly terminated: it is found in a progressive and incomplete state; its history, in such cases, is unfinished.

Fungus hæmatodes, on the contrary, if allowed to attain its proper result, invariably terminates, not in ulceration, but in sphacelus.

Cancer may slough from the violence of the ulcerative action, or from the rapidity of its ravages: it never sphacelates, however; for, if I rightly comprehend the term sphacelus, it signifies a failure and cessation of the *simple power to live*: whereas, any other kind of mortification implies that there has been an effort to accomplish more than the mere support of life,—*e. g.* inflammation or ulceration. Again, it is notorious that the skin over a fungus hæmatodes almost always ulcerates; probably from the powers of life in the part yielding before they are sufficiently impaired to be capable of being suddenly arrested like the life of the substance of the tumor, which, as hath been said, invariably sphacelates, unless where the patient's death has cut short the disease in its progress, and before its history is complete.*

In an Essay upon the Pathology of the Muscles, which I submitted to the council of the College of Surgeons, and to which they did me the honour to award the Jacksonian prize, in the year 1822, I gave the following account of the different ways in which I have seen the muscular structure invaded by cancer and medullary sarcoma.

I have twice or thrice observed a cancerous tumor encroaching upon the muscles with which it was in contact, and obliterating the muscular fibres; but in no case more distinctly than in that which first led me to a knowledge of the fact, and which is illustrated by the preparation in my own collection. This preparation consists of a section of a cancerous tumor situated between the integuments and the gluteus maximus of a labouring man. (*See fig. 4.*) The white cartilaginous and lobulated substance composing the bulk of the tumor has all the characters of cancer; the striæ and the interposed substance being both ob-

* The blood-vessels of the integuments opened by ulceration pour out blood, as well as those of the substance of the tumor, opened by sphacelation, or burst for want of tone. It may be mentioned here, that all consideration of cancerous ulcers, primarily such, has been here entirely omitted; this paper being merely on Tumors.

servable in its section, and an appearance of incipient ulceration having been noticed at one point (as not uncommonly in true cancer,) in the centre of the schirrous mass. At its upper part, this tumor is represented distinct from the fat; but (as is usual in such cases) it is more and more confused with the surrounding laminae of cellular membrane, as we approach its centre; so that the circumference of the tumor appears partially composed of constricted cellular substance, and not so pale as its central portion, which is also less membranous, consisting of a larger proportion of the interposed substance, and being indistinctly circumscribed and separated from the rest of the mass of the tumor by a thin lamina of cellular membrane. In the lower part, the cancerous growth is in contact with the coarse fibres of the gluteus muscle; and at this part are to be observed little gristly points and projections, sprouting from the cancerous mass, and insinuating themselves between the muscular fasciculi. Tough shreds of cellular membrane are attached at this part to the tumor, and the muscular fasciculi suddenly terminate in between the bases of the gristly cancerous points before mentioned. It is as though the cancerous growth sprouting between the muscular fasciculi had gradually retracted them into its substance, where all traces of their fibrous or muscular character are suddenly lost, in consequence of the pressure, or at all events of absorption; so that they are, in effect, *inserted* into the tumor; while they remain unaltered without it.

When a tumor of medullary sarcoma forms under a muscle (*e. g.* under the pectoralis major), it becomes attached to the fibres, oftener than cancer appears to do; but it does not adhere so firmly. At first the substance of the fungus is separated from the cords of muscular fibres, by laminae of cellular membrane interposed; and the distinction between the lobulated surface of the diseased mass and the fasciculi distended over it, is rendered distinct by the homogeneous texture and uniform paleness of the pulpy body, and by the redness (or, in an old preparation, by the brown colour,) of the bundles of fibres. The muscular fasciculi are now continued from beyond the neighbourhood of the disease, across it, and onward to their natural insertion in their tendon; and they are stout enough to admit of being torn up from the surface of the tumor.

After a time, not only does the distinction by the laminae interposed become less demonstrable, but also the fibres composing the muscular fasciculi have become paler and softer, and more liable to break short off if raised up, and less distinct, one from the rest.

The muscular fibres become less and less distinguishable from one another as the disease continues to advance, and less distinguishable also from the substance of the tumor; and they are

rendered so soft that they cannot be torn off. A magnifying glass, however, enables us still to trace the lowest muscular fasciculi from their natural origin, where they are apparently sound, into the substance of the tumor, where they are lost in the homogeneous and uniform white pulp. In the fasciculi above those that, being the most internal, are first lost in the tumor, the disease has not yet so thoroughly exerted its influence: in these one may observe more of the form of muscular fibres, collected in fasciculi; and they may even be traced, by the aid of the glass, right through the diseased mass; though to the naked eye they seem a portion of the medullary sarcoma, in no respect different from its original pale substance. The change is gradual from the homogeneous and uniform pulp composing the central part of the tumor, through successive strata of muscular fibres, all of one magnitude, individually, but in consistence and colour less and less resembling the pulp as we recede from it, until they are found running across it, in a condition to all appearance nearly, or perfectly, healthy. In some examples, the softened and whitened mass of lower fibres is separated from the sounder muscular structure above it, by a membrane apparently the same as that which separates one mass of fasciculi in a healthy muscle from the rest. The invasion of the muscular structure by the medullary sarcoma is not, therefore, to be defined an obliteration of them; but (if I may be allowed the expression,) as a gradual metamorphosis of their proper texture into that of the morbid pulp.* (*See fig. 5.*)

I am not aware that cancer ever begins in the substance of a muscle; but I have several times seen what Mr. Abernethy remarks,—viz. “In the advanced stage of carcinoma, a number of small tumors, of similar structure to the original disease, forming at some distance around it;” and, in the case of E. B., a patient who died in St. George’s Hospital some years ago, with cancer in every structure of her chest, except the heart, many little pisiform tumors were found interspersed loose among the fasciculi of the humoral muscles. These small tumors were, however, invested only by the cellular membrane, and no where incorporated with the proper muscular fibre.

The following is a case of medullary sarcoma, beginning within the biceps flexor cubiti; for which, as well as for the preparation, I am indebted to my late father. (*See fig. 6.*)

I. K., in January, many years ago, took the advice of a surgeon of eminence and of distinguished talent, for herpes on his leg. He had also a large tumor on his left arm, containing

* It is not asserted that the above are the only ways in which the muscles are invaded by cancer and fungus hæmatodes; although they are all with which the author is acquainted.

a fluid, and evidently connected to the biceps muscle. He attributed this to a strain in the month of June previous. In the beginning of March, the swelling had increased; and, on the 12th, a seton was passed through it, and a small quantity of bloody fluid was discharged. On the next day he had a rigor, and appropriate medicines were prescribed. On the 14th, the febrile symptoms were increased in severity: he had been delirious, and there was now no discharge; but, on the next day, much bloody serum drained away, and the tumor was diminished in size. He had dyspnœa, and expectorated; the pulse was irregular, but not weak. On the 17th, his arm was very sore, the tumor rather less; the pulse still intermitting, but not frequent. On the 18th, he died.

On dissection, the whole tumor was found comprehended in the dilated aponeurosis of the biceps muscle: it contained a large quantity of bloody serum, and its anterior part was in a state of sphacelus; the posterior being that which is represented in figure 6. In the drawing the muscle is portrayed, as it is in the preparation, suspended by its tendon; and the disease appears situated in that portion of its belly which corresponds with the short head, the fleshy part of the long head hanging behind, and on the right of the drawing. The diseased surface is composed of jagged nodules, of medullary sarcoma, mingled with shreds of cellular membrane.

The muscular fibres cannot be traced into the fungous surface in that regular and distinct gradation which is observable in figure 2; but those nodules of medullary consistence and colour, when viewed through the magnifying glass, are seen to consist of muscular fibres, unaltered as to form individually, but shrunk and *resserrées*, like those of a piece of meat on the burning coals. If the points of two needles be introduced, (as in the drawing,) with their points in contact, into one of the nodules of medullary matter, and there gently separated, the substance decidedly splits, and this only in one direction; and, care being taken not to break the softened texture, the glass shows the surface thus torn to be indisputably fibrous, and in every respect the texture of *medullized muscle*, (if such a term may be allowed.)

The change, however, in the length of the fibres, from their natural consistence, tenacity, and colour, to the state of disease implied, is too sudden to allow of their being satisfactorily traced; and it is to be remarked, lastly, that the investing membrane of the fibres and fasciculi remains, in general, in the form of tough and strong shreds, in the midst of the fasciculi changed into the medullary pulp.

Cancer and fungus hæmatodes having been thus shown to be specifically distinct, first in their proper terminations, and se-

condly in their modes of invading the muscular structure, the nosological question concerning their identity is so far determined in the negative; for, surely, although their dissimilar structures should be found in one and the same tumor, and much more if only in the same subject, there are still sufficient grounds to authorise us to say that such a case is not the exhibition of two concomitant varieties of one disease, but the absolute concomitance of two. And, although the predisposition to either of these diseases should be proved to be one and the same, and the constitutional tendency to both identical in kind, or even in degree, still must they be considered as distinct, if not as nearly opposite, productions.

In regard to the latter of these two diseases, I may add to what I have written, that I have seen the medullary sarcoma, and the mottled variety of fungus hæmatodes, composing different parts of the same tumor. I have also examples of medullary sarcoma, coexistent with the substance of one of those very rare tumors, which consist of a diaphanous and lobulated vascular texture, as soft almost as size, and not very unlike it in appearance; and, with regard to general form and disposition, to be best described as *soft cancer*. Lastly, I have observed all degrees of resemblance and approximation, as well as the accident of coexistence, between the mottled variety and the soft brown or black substance, which, mixed with recent coagula, or not so, is often to be found coexistent with medullary sarcoma.

These four varieties of disease, viz. the medullary sarcoma, the soft cancer-like substance, the mottled variety, and that which is brown or black, I am, therefore, inclined to include in the term fungus hæmatodes; not so much, however, because they are concomitant, as from their having the same history,—the same inevitable disposition ultimately to sphacelate,—the same hæmorrhagic tendency, &c. &c.

20, South Audley-street; January 2d, 1826.

ART. II.—*A Case of Epileptic Convulsions and Hemiplegia, the consequence of a Contusion on the Head, cured by the Application of the Trephine: with Observations.* By ANDREW BLAKE, M.D. Member of the Royal College of Surgeons, and Surgeon to his Majesty's 7th Regiment of Dragoon Guards.

A YOUNG man, of the bilio-sanguineous temperament, a soldier in the 5th regiment of Foot, stationed at Dominica, received, on the 4th of February, 1824, while wrestling with a robust comrade, a blow on the centre of the right parietal bone, from the clenched hand of his opponent; which, however, did not

divide the integuments. On the 8th, (four days subsequent to this occurrence,) he came to the regimental hospital, complaining of general symptoms of fever; but did not then mention having received the injury alluded to. The symptoms yielded to the common antiphlogistic treatment in a few days; but headache remained, and gradually became more violent: the pulse at the same time became unusually slow, and the tongue extremely foul. For these complaints he was bled locally and generally, and purged freely: mercury was also administered, and blisters were applied to the head. As soon as the system became affected by the mercury, the pain of the head ceased; and he was discharged from hospital on the 24th of February, in apparent good health.

On the 29th of the same month, however, he returned to that establishment, complaining of pain in the whole of the upper part of the head. The pulse was as slow as sixty in a minute, and came down to fifty-four; the tongue also became thickly loaded, and the pupils were much dilated. A repetition of the treatment which had already been successful was put in practice, but not with a similar result, for the patient did not experience the slightest relief; and, on the 2d of March, after having suffered all day from excruciating headache, (for which he was again bled, &c. &c.) he was seized, at two o'clock P.M. with a fit of epileptic convulsions; on recovering from which he was found to labour under hemiplegia sinistra. The epileptic fits were shortly renewed, and continued, with scarcely any distinct intermissions at first, and none latterly,—the disease then only exhibiting an occasional remission. From the rattling noise, effusion had, to a certain extent, apparently taken place into the trachea; and, from the stertorous breathing, the state of the pulse, and general appearances, a fatal result was hourly expected. Bleeding, the croton oil, purgative and stimulating enemata, were now resorted to; but without any improvement.

Under these distressing circumstances, the application of the trephine to the site of the original injury was, in consultation, deemed the only means, untried, which afforded any chance of success. Accordingly, about seven P.M. I performed the operation in the ordinary way, in presence, and with the assistance, of Dr. Ramsay, surgeon to the Forces. The skull was observed to be exceedingly thick, and but little adhesion seemed to exist between it and the dura mater; but there was no appearance of any fluid collected on or under that membrane, nor was any irregularity of the internal surface of the cranium to be perceived; yet, from the moment the circle of bone was removed, the paroxysms became considerably mitigated, and they ceased altogether in the course of a few hours.

This patient had no return of the epileptic fits, and recovered

perfectly the power of his side within less than a month ; the pulse also gradually acquired its natural degree of frequency. It was, however, thought proper to remove him from a tropical climate, as having undergone the operation of the trephine ; and, since his return to Europe, I saw him at Chatham in perfect health.

In the 17th volume of the *Edinburgh Medical and Surgical Journal*, page 322, there is a case analogous to this in its origin, as well as in some of its effects. Dr. Craigie, in a paper he wrote on the *Pathological Anatomy of the Human Brain and its Membranes*, describes the case briefly thus:—"A man, of about thirty-five years, who had received a slight blow on the head, began, some time after, to labour under pain of the whole syncipital region, and, in the course of a few months, had complete amaurosis of both eyes. Remedial treatment was employed, under eminent surgeons, without much benefit ; and, in addition to his other maladies, he soon became epileptic. After suffering, in a hopeless manner, under his complaints for the space of six months, he fell into a comatose state, and died in a few days. On opening the head, it was found that the internal table of the cranium did not adhere with its usual firmness to the dura mater, but dropped off as soon as it was divided all round by the saw. Absorption had rendered the surface of the cranium unequal."

This case, I think, is a fair example of the effects which may arise from a slight blow on the head ; and, from the similarity of its course and leading features to those of my patient, I am led to think that, had the operation not been performed, he must have shared a similar fate.

It may be asked, in what manner did the operation act, as no collection or spicula of bone were discovered ? To this I can only say, that, in addition to its derivative effects, on the principle of the action of the moxa, issues, &c. &c. the determination of blood to the head, in this particular case, may have been relieved on mechanical principles ; as it appears, from the experiments instituted by Dr. Kellie, and published in the *Transactions of the Medico-Chirurgical Society of Edinburgh*, that, in animals on whom the operation of the trepan had been performed, previously to their being bled to death, the brain, on dissection, contained very little blood, (of course, owing to the admission of atmospherical pressure on the brain,) while, in those whose heads were entire, it contained a considerable quantity of that fluid. The brain, also, this gentleman says, continues to fill the cranium in one case, while it subsides within it in the other.

The gradual, but regular, amelioration of the symptoms, in the case here alluded to by me, from the moment the circle of

bone was removed, tends, in a great measure, to incline me to attribute the success of the operation to effects referrible to Dr. Kellie's theory. The loose attachment of the dura mater to the cranium, which was observed after the operation, may have also assisted materially in inducing the salutary result, and may also tend to show that Dr. James Johnson's objection* to Dr. Kellie's theory, as contained in page 289 of the *Medico-Chirurgical Review* for September 1824, is not always applicable to it.

The experiments of Dr. Kellie above alluded to may serve eminently, in the hands of physiologists, to elucidate the theory of certain cases of epilepsy, and likewise to point out principles on which the cure of this obstinate disease may be conducted. I, however, do not pretend at present to do more than simply relate the case as it occurred to me in regimental hospital practice, and endeavour, as far as I can, to explain the principles on which its success may have depended.

London; November 1825.

ART. III.—*On Arsenic and Sulphate of Quina in Acute Rheumatism.*

By JOHN WHITING, M.D. Physician to the Surrey Dispensary.

It not unfrequently happens that valuable remedies lose their hold on the good opinion of medical men, and are thrown aside, for want of a correct knowledge of their mode of operation. Impressed by this consideration, I cannot but hail, as a happy omen for our science, the desire lately excited amongst us to investigate more fully the peculiar effects of our medicinal agents. Towards this object I have lately been directing my attention, and, as my inquiries have already led to results which appear to me of some moment, I am induced to request you to allow your Journal to be the channel of communicating them to the profession.

A residence of several years in the vicinity of a marshy district in Norfolk, afforded me abundant opportunities of studying the nature and treatment of intermitting and remitting fevers. Among other facts which came to my knowledge, I observed that the objection which is made to the administration of bark during the paroxysms of these fevers, does not apply to the use of the arsenical solution. Indeed, I found, not only that there was no increase of fever, nor any unpleasant symptoms produced, but that, by continuing the medicine without any reference to

* Dr. Johnson's objection was founded on the intimate adhesion which, in a state of health, exists between the external surface of the dura mater and the cranium, and which the Doctor imagined would counteract atmospherical pressure on the brain.

the paroxysms, especially in remittents, I gained much time in effecting a cure.*

A striking resemblance appearing to exist between the remittents under my care and the fever which accompanies acute rheumatism, I was led to make trial of the solution of arsenic in the latter of these diseases; my hopes of its utility being much encouraged by the strong testimony of Dr. Haygarth in favour of the cinchona.

I need not inform the medical reader, that, although the fever and inflammation which are attendant on acute rheumatism can be often quickly suspended by blood-letting and the general antiphlogistic treatment, yet the peculiar character of this disease, and that which renders it most difficult of cure, is its liability to pass from joint to joint, accompanied by fresh accessions of fever, and the tendency to the return of the symptoms, even after the patient has apparently recovered. It was with a hope of obviating this difficulty that I resorted to the trial of arsenic; and it gives me pleasure to be able to state that my hopes have not been disappointed. For this purpose, I adopted the method of administration which I had found effectual in remittent fevers,—viz. from six to ten drops of the liquor arsenicalis, taken every three or four hours, without any regard to either the fever or inflammation. Under this treatment I discovered that, in many cases, none of the symptoms returned after the existing paroxysms had subsided; and that, in other instances, the future attacks became gradually weaker, and the patients were speedily cured.

Having thus satisfied myself that arsenic possesses the power of arresting the course of acute rheumatism, and knowing the close analogy which exists between the action of this medicine and the cinchona, I was induced to make trial of the sulphate of quinine; hoping, at the same time, that this beautiful preparation might also be found free from those objections which attach to the bark, when administered in substance during the existence of fever. The dose I gave was two grains, repeated every two or three hours.

After I had strictly watched its effects, I became convinced that this medicine, as well as arsenic, may be given with perfect safety both in remittent fever and acute rheumatism, even while febrile action is present; and that, in these diseases, it possesses the same property of wholly arresting, or greatly mitigating, the future paroxysms.

* I cannot help considering as groundless the fear which is entertained by many medical men of the effects of arsenic, when taken in the doses described in this letter; for I do not recollect, among the numerous cases which I have treated, any unpleasant occurrences arising from its administration.

I wish it, however, to be distinctly understood, that I have not discovered, in the operation of these remedies, any power of removing febrile or inflammatory action, when it has commenced. I attribute all the good which has resulted from their employment to some change produced in the system, by which, after a remission has taken place, a return of the symptoms is prevented. That they possess this valuable property in the cure of intermittents and remittents, has long been well known: that they possess the same power when employed in acute rheumatism, is the principal fact which I wish to make known by this communication.

From the foregoing observations it may be discovered, that the treatment suggested by them will not, in any degree, interfere with the antiphlogistic means which are usually employed to subdue existing fever or inflammation: indeed, the two measures may be most advantageously combined; for, while the one is calculated to cut short the paroxysm, the other either wholly prevents a return, or so mitigates future attacks as greatly to expedite a cure.

During a few months of the present year, while my attention has been directed to this subject, remittent fever and acute rheumatism have been prevalent in Southwark; and it appeared to me a duty to make known to some of my medical neighbours the substance of the preceding remarks, that any opportunity which should occur to them of aiding me in my researches might not be lost. By this means I have been favoured with cases corroborating my views; and it seems now to devolve upon me to make my opinions more public, in order that they may pass the ordeal of a more general investigation.

Before I conclude, I cannot refrain from observing, that I anticipate a great improvement in our treatment of many other diseases, by following up the indication which these medicines appear adapted to fulfil,—viz. the prevention of a periodic recurrence of symptoms. In gout, which in its character so much resembles acute rheumatism, I believe they may be administered with very great advantage. My friend, Mr. Greenwood, has lately had an opportunity of trying the effects of the sulphate of quinine in two cases of this disease, and he has informed me that in each of them it effectually prevented the recurrence of the paroxysms of pain, &c.

Hemicrania, tic douloureux, and many periodical diseases, are known occasionally to yield to the employment of arsenic and the quinine; and I do not think it unreasonable to indulge a hope that they may prove useful auxiliaries even in continued fevers, as remissions are frequently observed to take place, either spontaneously or from the effect of treatment. This subject is now occupying my attention; and the result of my

inquiries, if it should appear to me worthy of notice, I shall have pleasure in communicating to the profession.

In the mean time, I am induced to request the attention of my medical brethren to the effect of the quinine and arsenic administered, in the way described in this letter, to patients labouring under acute rheumatism. Should any of your readers be led to give them a trial, it will afford me great satisfaction to learn the result, either through the medium of the public Journals or by private communication.

*Rodney Buildings, New Kent-road;
October 1825.*

ART. IV.—*Case of Poisoning by Opium, in which Blood was found effused in the Brain.* By GEORGE JEWEL, Esq. Surgeon, &c.

THE following interesting case of a young woman, whose death was occasioned by taking laudanum a short time ago, having been brought before the Westminster Medical Society, and which, in a few particulars, although probably not very material points, was (as I have since learnt) inaccurately stated; and, as a garbled account of it has also appeared in the different newspapers, I have deemed it expedient to draw up the following narration of facts as they really occurred, for insertion in the pages of the Medical and Physical Journal. I feel that some apology will be necessary for my apparent prolixity; but, for the reasons above stated, I wish to give all the particulars of the case, as they will also throw some light upon the circumstances which conduced to a state of despondency in the patient; it having been reported that no cause could be assigned for so desperate an act as self-destruction.

Mrs. B—, ætat. twenty-eight years, residing in St. Martin's-lane, consulted me in the month of July, being then in a state of pregnancy, for a complaint which, she candidly said, she suspected was venereal, and which she represented had been communicated to her by her husband. Upon an examination, I found her statement corroborated by the presence of a venereal sore upon the internal surface of the right labium, accompanied by considerable gonorrheal discharge. Notwithstanding the immediate administration of mercury, and the consequent ptyalism which it produced, and the extent to which I conceived, under existing circumstance, it might be carried with impunity, secondary symptoms began to manifest themselves, the disease having doubtless existed some time, by the evidence of a small ulcer which appeared upon the surface of the right tonsil.

After the system had been kept charged with mercury about three weeks, the patient applied, with my concurrence, to Sir

Astley Cooper; who advised that the mercury should now be discontinued, and prescribed for her the compound decoction of sarsaparilla, &c.

Although the disease assumed a favourable tendency, it was evident her spirits gradually became exceedingly depressed; and, notwithstanding my repeated assurances, and those also of my friend Mr. Boyle, (whom I had requested to see her,) of a happy termination of her complaint, her mind became so absorbed with an idea that the disease would never be eradicated, that nothing could remove the impression. This arose, as it has since appeared, from the fearful anticipation that the gentleman by whom she became pregnant, and who then resided in Holland, should return to England, and find her and his child in a state of disease.

The time, however, at length arrived for her accouchment, and I was accordingly sent for. The labour was natural; the infant perfectly healthy; and her recovery was rapid. The dejected state of her mind still continued, with scarcely any variation, and evidently was not influenced by the change of the parturient function.

On the day fortnight after her delivery, late in the evening, I was summoned rather hastily to see her; but, being in attendance some distance off, I did not reach the bedside of the patient until half-past ten o'clock, so that an hour and a half had elapsed after the period of her taking the laudanum. Learning from a second messenger, whom I met before entering the house, that she had been very sick, I procured an emetic of ipecacuanha and tartarised antimony; but, on going into the chamber, I immediately suspected, from the state of insensibility in which she lay, and from a knowledge of the preceding circumstances, what had happened; and my suspicions were soon confirmed by the nurse's producing a wash-hand basin, containing some portion of the contents of the stomach which had been ejected, and in which the opiate effluvia was exceedingly powerful. I immediately administered the emetic I had brought with me; and, at the same time, I sent to Mr. Tweedale, surgeon, of St. Martin's-lane, whose residence was near at hand, requesting his attendance, and that he would bring with him an emetic; which he kindly did. A strong dose of the sulphate of zinc was now given in solution, followed by large potions of mustard infusion; which, together with constant irritation of the fauces with a feather, excited the action of the stomach, and she vomited copiously; after which she recovered her senses sufficiently to acknowledge, on being questioned, that she had swallowed about two ounces of laudanum, procured from different chemists' shops in the neighbourhood. Not being satisfied that we should succeed in dislodging the whole of the

poison by emetics, I suggested the employment of the stomach pump; and Mr. Bampffield, having one in his possession, was sent for. This gentleman speedily arrived, accompanied by Mr. Weiss, the surgeon's instrument maker, with a new instrument; and no time was lost in introducing the tube into the stomach. It is necessary I should here observe, that two hours had now elapsed since the opium had been taken. The remaining contents of the stomach were quickly evacuated. Tepid water was then thrown in, and again discharged; and, after two or three effective operations of this kind, there was neither the appearance nor the slightest effluvia indicating the presence of laudanum in the fluid thus evacuated.

Cold affusion was now liberally employed, by pouring water from a jug over the head and neck of the patient; the effect of which, at first, was remarkable. By her own unassisted muscular powers, the poor woman raised herself up, and in a feeble voice requested time to breathe. But this temporary re-action was but of short duration; for she immediately sunk into that comatose state from which she had momentarily recovered.

It was now deemed necessary to throw into the stomach stimulants of ammonia, brandy and water, &c., and injections into the rectum; which last were easily accomplished by the same instrument, according to the directions given with it. The nostrils were stimulated also by a feather dipped in the liq. vol. corn cervi; friction was incessantly employed, and all the means usually adopted upon similar occasions: but, notwithstanding our most indefatigable exertions, the breathing soon became more and more difficult and stertorous; the whole frame shrunk into a state of collapse; and, after one or two convulsive efforts, she expired at five o'clock in the morning, eight hours after swallowing the fatal draught.

Appearances on an examination of the body, thirty-three hours post mortem.

Upon cutting through and everting the abdominal parietes, the aspect of the viscera was perfectly healthy; and, on a minute investigation, no morbid appearance whatever, not even the slightest inflammatory blush, could be discovered, either in the stomach or in any portion of the alimentary canal. The thorax being laid open, the lungs were quite sound, and of the usual colour. The heart was pale, bloodless, and flaccid. On removing the calvarium, the vessels of the dura mater looked turgid; those of the arachnoid membrane and pia mater still more so; and, upon an examination of the cerebrum, the whole of the vascular system of the brain appeared enormously tumid, every vessel seemed gorged with blood. On tracing the veins which lay rather more obscure, a breach in two or three distinct

points had evidently taken place, and which was clearly indicated by pieces of coagula; one of which, lying at the superior margin of the right lateral ventricle, must have measured upwards of an inch in extent.

Upon the whole, the appearances which presented themselves in this case seemed to bear a very strict analogy to those which are commonly observable on an examination of the cerebral structure, after death by apoplexy.

It is but justice to the ingenious inventor of the stomach pump to add, that the instrument used in the above melancholy case answered every purpose for which it was intended: at the same time, I should be guilty of a direlection of professional duty, did I not suggest that every practitioner should become familiar with its use; for, although its construction is by no means intricate, yet, if a person attempts to employ it without being previously instructed in its mechanism and mode of action, he will not only find himself extremely embarrassed, but, in all probability, will fail in effecting that good which otherwise might result from his humane exertions.

30, Gerrard-street; Dec. 9th, 1825.

ART. V. — Case of Anchylosis in the Knee-Joint, cured by a modified Application of Moxa, and other hitherto unknown therapeutical measures. By JAMES BOYLE, Esq. Member of the Royal College of Surgeons, &c. &c.

PERHAPS there are no two extremes more injurious to the advancement of science, than those of scepticism and credulity. To persons who refuse credit to every new fact, merely because it is new, all improvement must necessarily appear doubtful; and, on the recollection of those whose understandings have frequently been imposed upon, in consequence of their overcredulity, important truths leave but a feeble impression.

And if, as must be admitted, novel facts can be substantiated, even in the opinion of the candid and impartial, only by clear and satisfactory evidence, it cannot be expected that the incredulous or the suspicious will be convinced by any thing short of decisive and unquestionable proof. By such proof it will be found that the subjoined statement is fully and undeniably sustained.

Master Frederick Tryon, aged twelve years, had a fall on the 25th of April, 1823, when the left knee was wounded over the inferior portion of the ligamentum patellæ, by coming in contact with a sharp stone. He was immediately attended by a surgeon, but, from the depth of the wound, and the concomitant inflammation, it was not till the fifth week after the accident that he

was able to walk out; and even then the support of a splint was deemed necessary. On this occasion, he unfortunately fell twice upon the injured part, which produced immediate sickness of stomach, headache, and acute pain in the knee; succeeded by violent inflammation and high fever, which continued for many weeks.

From this time till the beginning of October, he was confined to bed by the successive formation of abscesses, both above and below the knee-joint; during which period, his health being in a most precarious state, a physician and surgeon were in daily attendance.

The abscesses being now healed, friction was employed till the following March, when he was removed to Hinckley, for the purpose of being nearer Dr. Hill, under whose directions and care he remained till February 1825, wearing an instrument and using friction all that time to no purpose.

On the 14th of February, 1825, he arrived in town, and Mr. Brodie was called in; who, believing this to be a case for moxa, was so kind and liberal as to recommend its being placed under my care.

At this time, the leg formed a right angle with the thigh; the muscles of the whole limb were greatly wasted; the knee was much swollen; and there was no distinct motion to be felt either in the patella or the knee-joint. There was no pain in the limb, unless some violence were applied, when the most painful shock was experienced in the joint. In short, this was a case of ankylosis, such as I believe most surgeons would have given over, as one for which nothing could be done beyond the recommendation of a high-heeled shoe.

The case, however, proved to be that species of ankylosis which by medical men is termed *false*, although at first sight there was strong reasons to believe that ossific union of the patella with the articulating extremities of the bones forming the joint, (a state which constitutes what is termed *true ankylosis*,) had actually taken place.

The treatment decided upon, in which I had the sanction of Mr. Brodie, was the application of moxa to the joint once daily, the use of friction, and the application of steam twice daily: the former continued an hour, the latter half an hour, on each occasion of being used.

This practice was continued for some weeks, when slight motion of the joint was produced, and all sensitiveness and pain on exertion were removed. It was now but too evident that these measures, alone, were not equal to the cure of the limb: I, therefore, suggested the use of an instrument, which I have termed a *genu-rector*, such as is described in my Treatise on Moxa.

An interval of a month, from an accidental circumstance, now unfortunately took place between the applications of the moxa; the instrument being still in preparation. In the mean time, much of the advantage which had been gained was lost by retraction of the muscles; the only remaining perceptible good from the previous treatment being that of the removal of all pain and morbid sensitiveness from the joint.

On the 23d of June, the instrument being completed, it and the moxa only were used: the instrument thrice daily, an hour each time; the moxa, once a-day, was applied to the whole track of the articulation, but especially round the edges of the patella.

In a short time, the advantages of the above practice were apparent: the knee became lessened in size, and the muscles of the leg and thigh began gradually to swell out, as the joint became acted upon by the revulsive powers of the moxa, and the extending powers of the genu-rector. A great evil now was the strong power of contraction which the muscles manifested, on a removal of the above means of temporary extension. To remove this inconvenience, an ingenious instrument, manufactured at Hinckley, and which had been used, previously to Master Tryon's having been put under my care, for the space of twelve months to no purpose, was at this period of the treatment brought into requisition, and proved particularly serviceable by keeping up the extended position, which was gradually obtained by the other more powerful agents, till the limb became perfectly straight.

At this time, it was not a little remarkable that the patella had yet acquired but an extremely limited motion, and that flexion was also proportionately confined. To produce a straight limb, however, was of the first importance; and, as motion could not be obtained without retarding the first process, the latter object was considered of secondary consequence only: finally, therefore, the Hinckley instrument was only used occasionally, when, in fact, it appeared necessary to counteract the disposition to contract, which still affected the muscles in a slight degree.

For the last few weeks, much walking and marching have been practised, in addition to the means enumerated; and, last of all, motion has been excited in the joint by means of swinging the limb, a heavily-loaded shoe being appended. Since the commencement of the last process, the return of motion in the joint, though slow, has been regular and progressive; a decided amendment being evident each succeeding day.

The inferior portion of the patella is now quite free; but the superior angle being bound down by condensation and thickening of the capsular ligament from former inflammation, a peculiar

kind of semi-rotatory motion is produced ; the bone turning upon its own axis, as if on a pivot.

The young gentleman now walks so well, that, to the eye of a stranger, no lameness is perceptible ; and I feel quite confident that the joint, in a short time, will have, if not full, at least sufficient motion for all useful purposes.

In conclusion, I would beg to make one or two observations on the pathology of the knee-joint, which, I think, bear upon an important question relative to its functions, when perfectly free from disease. In the healthy state, it is generally believed, and taught in the anatomical schools, that free motion in the patella is essential to action in the joint : nay, that, if there be any obstruction to the action of the patella, motion in the limb must, in consequence, be rendered impossible. Here, however, we had motion in the joint, when action in the patella, if any existed, was extremely doubtful.

Still the motion of the joint continued to increase, which induced a stricter investigation of this subject. If the leg be moved upon the thigh,—that is, if flexion and extension be alternately performed, it will be found that the patella, contrary to general opinion, is quite passive ; that it is only the articulating ends of the femur and tibia which act ; that the patella is then a fixed point, and that this bone does not move unless under the circumstance of perfect extension of the limb, when it may be moved in all directions with the fingers. This may be more fully illustrated upon the dead subject, on elevating the leg, by pulling upon the rectus femoris, without materially altering the position of the patella. This being the case, then, it is clear that, if even ossific union should take place between the femur and patella, motion might still be effected by an increased power in the lateral portions of the capsular ligament, acted upon by the natural contraction of the fibres of the rectus femoris ; provided, however, that no similar pathological change existed between the tibia and inferior portion of the patella.

I may be permitted to add, in confirmation of the above statement, that during the interval, already mentioned, between the applications of moxa in the early part of the treatment, Mr. Bacot saw the limb when it was nearly in its most contracted state, and that he has seen it recently, since the effect of that treatment has been experienced.

ART. VI.—*Remarks on the Erysipelatous Inflammation produced by the Juice of Rhus Toxicodendron.* By JOHN FROST, Esq. F.L.S. Member of the Royal Institution; Director of the Medical Botanical Society, &c.

It so rarely happens that cases of erysipelatous inflammation, produced by the juice of rhus toxicodendron, occur, that I have considered it incumbent on me to lay the particulars of two which have come under my notice before the profession.

The leaves of rhus toxicodendron, although retained in the materia medica list, are seldom used. Dr. Anderson, of Hull, has used them, in the form of powder, in cases of paralysis, in very small doses.

Before proceeding to detail the particulars of the cases, it may be remarked, that very many species of rhus produce, by coming in contact with the skin, great pain and inflammation. Gardeners not unfrequently have their hands *poisoned*, as they term it, by the rhus vernix; and, in pruning it, they are cautious not to allow the juice to touch them.

In visiting the garden of a physician in one of our northern counties lately, I saw rhus toxicodendron growing abundantly against a wall. On my making him acquainted with the acrimonious nature of the plant, he immediately ordered it to be rooted up, to prevent children or any person from being injured by it.

But to return to the object of this communication. I beg to observe that the first case was that of a man, who was employed to gather the leaves of rhus toxicodendron for the purpose of pharmacy; in doing which, some of the juice of the plant came in contact with his face, which it had no sooner touched than he began to complain of great pain. His face became reddened to an immense degree, accompanied by erysipelatous swelling, which increased rapidly to such an extent as nearly to deprive him of sight. His hands escaped injury in consequence of his having put on thick gloves, which he did from knowing the great acrimony of the juice of the leaf-stalks and twigs. Being in the garden at the time of the circumstance, I was called to him, and found him labouring under the effects I have just described. A brisk cathartic, consisting of calomel and jalap, was given him directly; and a lotion, consisting of Zinci acetatis, ℥ij.; Spiritus tenuioris, f.℥jss.; Tincturæ opii, f.℥ij.; Aquæ distillatæ, f.℥x. M. was frequently applied. Besides which, he had a draught, composed of Liquoris ammoniæ acetatis, f.℥j.; Liquoris antimonii tartarizati, gtt. x.; Misturæ camphoræ, et Aquæ menthæ viridis, āā f.℥vj. M. every six hours. This plan of treatment was adopted for the space of a week, with an oc-

casional dose of opium at bed-time, with great advantage ; but the swelling did not entirely subside till nearly a fortnight.

Since this case occurred, I had the particulars of another related to me by a medical man, who was unfortunately the subject of it, which are as follow : viz.—Being present at the gathering of the leaves of the plant, in the month of June, he took up some to examine their botanical characters, having taken the precaution of putting on his gloves previously to so doing. After a few minutes had elapsed, the weather being extremely warm, he took off his hat, and wiped the perspiration from his forehead with one of his gloves, which had imbibed a portion of the juice of the plant ; not recollecting at the moment that he had but just been handling the foliage of *rhus toxicodendron*. Exactly the same symptoms ensued as in the former case, and were relieved by a similar plan of treatment.

These cases will prove that it is the *juice* of the plant which, when in contact with the skin, produces the effects above described ; although a writer on the *Materia Medica* of the present day states, that “ the stems (of *rhus toxicodendron*), if cut or broken, exude a milky juice, which was supposed to inflame the skin wherever it touched ; but this is not the case, although the plant exudes a deleterious vapour,” which it is said to do during the night season. How far this latter observation holds good with regard to the gathered foliage, may be estimated from the fact of a man being engaged for a whole day in spreading about and drying nearly thirty pounds of the fresh-collected plant, and not experiencing the slightest inconvenience.

The truth of the cases here related does not rest on my testimony only, as the parties are still living, and there are several scientific individuals who were witnesses of the effects.

ART. VII.—*Observations on Small-Pox, as it has occurred in London in 1825.* By G. GREGORY, M.D. Physician to the Small-Pox and Vaccination Hospital.

It is now three years since I had the honour of submitting to the Medical and Chirurgical Society of London, some “ *Cursorory Remarks on Small-Pox, as it occurs subsequent to Vaccination.*” The favourable manner in which that paper was received by the public, induces me to think that a continuation of the same inquiry, founded on the results of more recent experience, may not be unacceptable. The circumstances of the times are peculiarly favourable to such an investigation. It is well known to all who have been practising in London, that small-pox has been met with very generally during the last year. With the cold of December, the prevalence of small-

pox has diminished, and we are now at liberty calmly and dispassionately to look back upon the events which have passed before us, and to form from them an estimate of the degree of security from this loathsome disease which the world enjoys from the discovery of Jenner. It is to this point, mainly, that the observations which I have now to offer are directed. To enlarge upon the importance of this object of inquiry, would surely be superfluous. Whether we view it in a pathological or in a national point of view,—whether we consider it as affecting ourselves or our patients,—we shall find it equally deserving of our most serious attention.

That small-pox has been decidedly *epidemic* in London during the year 1825, may be deduced as well from public as from private records. The admissions into the Small-Pox Hospital have been greater this year than in any since 1796, a year of such general and fatal small-pox, that 3549 persons are reported in the Bills of Mortality to have died of it; very nearly the largest number recorded since the commencement of the Bills of Mortality in 1592.* The annual admissions into the Small-Pox Hospital have only been exceeded on two other occasions during the course of the last half-century,—viz. in the years 1777 and 1781, when the deaths, by the Bills of Mortality, were 2567 and 3500, being about double the average numbers.

Finding thus that the admissions into the Small-Pox Hospital have always proved a fair index of the extent to which the disease has been prevalent in London, it may be inferred that small-pox has been nearly as general in 1825 as in any of the three great epidemics of the preceding century. And now let me solicit attention to the comparative extent of *mortality* in these several years. Had nothing occurred to alter the scale, it is reasonable to suppose that the deaths by small-pox this year, as reported in the Bills of Mortality, (taking into account the increased size of the town,) would have been at least 4000: yet the numbers reported are, in fact, but 1299; an enormous increase, indeed, upon the former year, which was but 725, but falling infinitely short of what would have happened but for the general prevalence of *vaccination*.

In the course of the last ten years, small-pox has been epidemic in various towns and districts of England: as, for instance, in Edinburgh and its neighbourhood, in 1818; at Norwich, in 1819; at Chichester and the neighbourhood, in 1822; at Oxford, in 1824. The disease in those places excited much more attention, and at Norwich, in particular, the havoc caused by it was comparatively much greater than has occurred in London this last year; the reason of which I believe to be this—that the

* The greatest mortality was in 1763, when 3582 persons died of small-pox.

practice of vaccination has been much more general in the metropolis than in the country, and that the opportunities of procuring fresh and good lymph are here necessarily so much greater.

In 1819, Sir G. Blane read a paper to the Medical and Chirurgical Society, showing, among other things, that vaccination had had a most marked influence in diminishing the general mortality by small-pox. He pointed out that, in the fifteen years preceding 1819, the mortality by small-pox, as reported in the Bills of Mortality, had not been more than one-half of what it was in the two like series of years in the middle and latter end of the last century. A table which I have drawn up of the admissions and deaths at the Small-Pox Hospital during the last fifty years, tend exactly to the same point. The admissions during the first twenty-five years of this century are 3743, and the deaths 1118; while the admissions during the last quarter of the eighteenth century, (when vaccination was unknown,) were 7017, and the deaths 2277, somewhat more than double.

I shall now direct my attention more particularly to the circumstances under which small-pox has presented itself at the hospital of which I have charge, during the year 1825; reserving to the last a notice of those cases which have occurred to me in private practice.

During the past year, 419 persons were admitted into the Small-Pox Hospital. 263 took the disease in the natural way, without previous protection; of whom, 107 died. Two had it subsequent to variolous inoculation; of whom, one died;—and 147 had small-pox after real or presumed vaccination; of whom, twelve died. The rate of mortality among those wholly unprotected was unusually high (forty-one per cent.), and proves the epidemic to have been one of exceeding malignity. The greatest mortality occurred during the months of July and August.

Of the 147 persons who had small-pox after real or presumed vaccination, 122 had the disease in some degree modified, or mitigated, and twenty-five passed through it in its natural and unmodified form.

This recital is certainly calculated to diminish, in a painful degree, the reputation which the cow-pox has so long enjoyed; and it is with much regret that I make such a statement. Yet, though the experience of this epidemic may tend to bring down vaccination from that exalted pinnacle of national importance which it has hitherto held, it would be most dangerous and most unscientific to go into the other extreme,—to abandon it because it does not fulfil all that our too-ardent expectations had anticipated, or to consign to reproach a most useful and most admirable discovery. In considering the cases which have

this year occurred at the Small-Pox Hospital subsequent to vaccination, the following circumstances demand attention:—

It must be remembered, 1st, that, though they are very numerous, a large proportion of them were exceedingly mild, and devoid of all *kind* and *degree* of danger. In many the disease was hardly to be recognised as small-pox: it was decidedly the *chicken-pox* of Dr. Heberden, and other authors who wrote prior to the discovery of vaccination. 113 of them were discharged, cured, within fourteen days from the period of admission; and thirty of these actually within seven days. In nine only was the convalescence protracted; and this was attributable either to constitutional weakness, or to accompanying disease. Two or three of them took small-pox after typhus, and others had enlarged scrofulous glands or sore legs at the time of their admission. One of them had supervening scarlatina.

X It should be remembered, 2dly, that there must always exist a difficulty in ascertaining exactly the reality of the previous vaccination. My rule, throughout the year, was never to exclude any one from this class who could show a scar, or (failing that criterion) who retained a distant recollection of having undergone some kind of protecting process. In many of the unmodified and fatal cases just referred to, the evidence of prior vaccination was very imperfect; but I do not wish to disguise my conviction that, in others, the proofs of vaccination were distinct and undeniable.

X In reference to these last cases, it should be considered, 3dly, that small-pox this year proved exceedingly severe to all who were *unprotected*; and it is not an unreasonable supposition that, to the malignity of this particular epidemic, something is to be attributed. Many circumstances conduce to the belief that vaccination may be capable of successfully opposing the contagion of small-pox in its *ordinary* degree of intensity, though it may fail in affording protection against it when in its *highest* degree of virulence. Had the individuals who have this year suffered severely from small-pox after vaccination been attacked by it in former seasons, they might possibly have passed through the disease mildly and safely. A similar period of general and fatal small-pox not having occurred for the last thirty years, may not recur for thirty years to come; and, consequently, a like unfortunate result with that which I now record may not, during that long period, be again witnessed.

4thly. A strong presumption in favour of the positive advantages of vaccination, may be drawn from this important fact, that, in the year 1825, a greater number of persons have been vaccinated at the Small-Pox Hospital than in any year since the discovery of the cow-pox; and I am informed that, at se-

veral of the stations of the National Vaccine Establishment, the numbers vaccinated in 1825 nearly double those of 1824. When we reflect that, during the past year, small-pox has found its way into every alley and lane in London, crowded with the densest population, and that whole families of vaccinated persons, of all ages from birth to five-and-twenty, have been every where fully and freely exposed to small-pox contagion, in a state of great intensity, it follows, I think, to demonstration, that the public (for whose benefit we are anxious, and who are, after all, the best judges of the question,) are really satisfied with the degree of protection which *genuine* vaccination, such as may be had in London, gives. 4003 children were vaccinated at the Small-Pox Hospital in 1825; and I am sure that, of them, more than one-half were brought by their parents under the pressure of small-pox at their very doors. Had they not seen vaccinated persons resisting the contagion effectually, they would not have subjected their infants to vaccination. It appears to me most important to bear in mind that, from the year 1806, when vaccination began to be generally practised at the Small-Pox Hospital, to the present day, the numbers have been steadily and rapidly augmenting. Dividing the last twenty years into four periods of five years each, the numbers have been 7004, 9339, 13,348, and 16,666. We may, perhaps, have heard of a dozen or twenty families in whom small-pox subsequent to vaccination, performed at our establishment, has occurred; but none of these persons have died, and few have been confined to their beds more than four or five days. Nay, more,—many of the parents of such children, notwithstanding this occurrence, have still brought their infants for vaccination.

The impression left upon my mind by the events of this very interesting year has been, that vaccination has the strongest claims upon the confidence of medical men, and on the national support; and that nothing further is to be desired, in the way of protection against small-pox, than a stricter attention, on the part of practitioners in the country, to the diffusion of good and genuine vaccine lymph, and perhaps some increased facilities, on the part of government, to the procuring of such lymph from large towns, where alone it can be obtained in that state of purity and perfection which is essential to the safety of the individual in after life.

The experience which I have derived from private practice during the past year, has been, upon the whole, less favourable than that which my hospital records afford. It has occurred to me to witness four cases of small-pox after vaccination; three of them young ladies, and the fourth a young German from

Hamburgh. Two I attended in consultation with Mr. Tupper, one with Mr. Rose, and one with Mr. Bradley. In one of the cases only was the complaint modified: the other three had it severely, and the German died upon the eleventh day of the disease. All of them had been vaccinated, and (as it was supposed) carefully; and scars, sufficiently indicative of the process, were perceptible on the arms of each.

These cases, taken singly, would lead to a most undeserved distrust of vaccination. I am very well aware, indeed, that a few (perhaps eight or ten) cases of a similar kind might have been collected together; but the general voice of the public satisfactorily showed that the upper ranks of society suffered, during the past year, from small-pox much less than the lower; and, in spite of the importance attached to every case of failure, the balance was so decidedly in favour of the preventive powers of vaccination, that very few persons were met with whose faith was permanently shaken. The upper ranks of society still continue to be vaccinated as heretofore; and thus unite with the great mass of the British public in offering the strongest possible testimony to the value of the splendid discovery of Jenner.

8, Upper John-street, Golden-square;
January 12, 1826.

ART. VIII.—*Cases of Tic Douloureux; in one of which the Patient took about eight Ounces of Carbonate of Iron in thirty-six Hours.*
Communicated by P. C. BLACKETT, Esq. &c.

CASE I.

MRS. C—, a widow, ætat. forty-three, of temperate habits and general good health, (except occasional colds, with rheumatism, &c. &c.) in January last applied to me, and complained of an occasional pain of the right side of her face, which had tormented her for upwards of two years, immediately in the vicinity of the parotid gland, and behind the ear of the same side: in the day-time she would have three or four paroxysms, but at night, or whilst in her bed, she was totally free from them. I found, on examination, the portio dura of the auditory nerve affected, very sensible, and bringing on an immediate paroxysm by the slightest touch. It was evident that the affection was in that part of the nerve, after it had given off the superior and inferior ramus, where it advances forward and through the parotid gland, to which it gives several filaments; some of these slender ramifications running from without internally, and surrounding that branch of the external carotid artery which

goes behind the ear. Regarding her complaint as produced by some irritation of the womb, caused by that period in the constitution of women commonly called *the change of life*, I gave her, after having regulated the bowels, the carbonate of iron, according to the plan of Mr. Hutchinson. She continued the remedy for nine or ten days, when the intensity of the pain was somewhat alleviated, and the frequency of the paroxysms reduced to only one in the twenty-four hours.

I advised her to persist in the use of the carbonate of iron for another week; but, at the end of that time, she continued the same as when I last saw her. I then recommended a blister to be applied behind the ear of the affected side, and to be kept open. This plan, with the use of the carbonate, was continued for eight days more: still she continued as before. I then omitted the remedies altogether, and gave her twenty drops of the tincture of belladonna three times a-day. This gradually, in the course of five days, relieved her completely of the paroxysm and the pain. Fearful of a relapse, I ordered her to continue the dose twice a-day for a fortnight; and she has not, since the first remission, complained of the disease.

CASE II.

Captain S—, ætat. twenty-six, in January 1823, complained of great irritation in the urethra and the bladder, with a constant desire to make water, especially after dinner: the urine flowed sometimes in a full stream, and at others in very small quantities. These symptoms of irritability of the bladder and the urethra were always attended with pain over the left eye. I pressed the first branch of the ophthalmic, or first branch of the fifth pair, and found that it gave him great pain; which, however, soon subsided. His description of the pain was, in every sense of the word, *tic douloureux*. I passed a full-sized bougie into the bladder; which operation also caused a pain in the nerve of the forehead. Considering that some tonic, as well as sedative, was necessary for his complaint, I ordered him the following pills; and to take castor-oil whenever his bowels were constipated.

R. Cupri Sulphatis, gr. iij.

Extracti Conii, ʒj. M. fiat massa in pilulas xxiv. quarum capiat unam 6ta quâque horâ.

In a week he was much relieved of the irritation of the bladder and the urethra, and in six weeks of the pain in the forehead. His appetite returned; he slept well, and continued to void his urine with ease, when I left him; which was three months after first attending him.

CASE III.

Letter from a Gentleman at Welford to Mr. BLACKETT, detailing his Case.

15th November, 1825.

IN reading the Medical and Physical Journal for October, page 288, I find a Treatise on the Tic Douloureux, and the mode of Treatment, written by you. I was pleased with your description, and particularly so because I have been labouring under the same tormenting malady for this last year, at intervals: but, at the same time, I was disappointed in not finding you so warm in your recommendation of a curative remedy, as in the description of the symptoms and nature of the disease. I am happy to say that, according to the plan of Mr. Hutchinson, the disease was arrested in about thirty-six hours; and I hope and trust that it may hold good, and that I may not have a relapse.

This time twelvemonths I was riding on horseback without a great coat, and without the usual precaution of tying a silk handkerchief round my neck; the wind blowing north-east, and a damp atmosphere. I felt an unpleasant cold sensation upon the zygomatic arch: this daily increased, until I experienced at times great pain, yet such as could be tolerably borne. Since that time I have had a few attacks more severe, and which induced me to try one-drachm doses of the carbonate of iron every six hours, mixed with honey; and a draught with it of the decoction of bark and infusion of cascarilla, with sulphuric acid. This gave relief, but did not cure the disease.

The next attack, I tried gum assafœtidæ, ferri sulphatis āā ʒss. fiat massa, et divide in pilulas xij. I took nine of these pills in the evening of the attack; and the draught, with bark, as before. This gave me more relief than the other, but appeared not sufficient to arrest the disease.

The next attack was in the evening of Sunday, after being at church. I felt a stream of cold air upon the vulnerable part, and expected another touch of it when I got home. In the evening I was seized with a paroxysm, more violent than any before. I directed my assistant to bring me a large tea-cupful of the carbonate of iron, mixed with honey. I immediately took four large tea-spoonsful of it, with a draught, containing one drachm and a half of the extract of sarsæ, and an ounce and a half of peppermint water, made doubly strong with the essential oil. I went to bed, and perspired through the night. My pain became tolerable. *I persevered in the same doses every six hours, day and night, so that the tea-cup, which contained eight ounces of the carbonate of iron, I took at six times: at that rate, the quantity I took for each dose was one*

ounce and two drachms, accompanied with one drachm and a half of the extract of sarsæ, every six hours. This plan was continued for two nights and one day; the disease being arrested. I then took the same quantity of iron twice a-day, and the dose of sarsaparilla at night, for a few days; and I am in great hopes of not having a return.

It proves what large doses of medicine can be borne, when under the influence of great excitement. The medicine had the effect with me of opening the bowels plentifully, but without griping.

I also applied a cataplasm, made with two table-spoonsful of oatmeal, one table-spoonful of flour of mustard, and white wine vinegar heated, to make it into a proper consistence: this I kept to the part for a few minutes at a time, as long as I could bear the heat.

11, *Park-street, Grosvenor-square*;
8th December, 1825.

[By another letter, dated December 22d, it appears that this gentleman continued quite well. We have not deemed it necessary to insert either of the rejoinders.—EDITORS.]

COLLECTANEA MEDICA:

CONSISTING OF

ANECDOTES, FACTS, EXTRACTS, ILLUSTRATIONS, &c.

*Relating to the History or the Art of Medicine, and the
Collateral Sciences.*

*Floriferus, ut apes, in saltibus omnia libant,
Omnia nos, itidem, depascimur aurea dicta.*

ART. I.—*Note on the Actions of the Muscular System.* By JOHN D. GODMAN, M.D. [From the *Philadelphia Journal*, No. 2, New Series.]

DURING a great lapse of time, the muscular system has been carefully studied by numerous intelligent and acute observers, in all countries where science has been cultivated; yet, notwithstanding their important labours, much remains to be known and explained relative to the structure of the muscles, and their modes of action. It is not with an expectation of supplying what is wanting to complete our knowledge of the muscular system that this note is written, but to invite attention to some interesting particulars which have been singularly overlooked by those who have heretofore treated of muscular action.

However rough and irregular the skeleton may appear when entirely denuded, it is most admirably formed for giving support and proper

attachments to the soft parts designed for the growth and motion of the frame; and, in the living condition, the adaptation of the soft textures to the bony fabric is productive of every variety of beautiful outline, whether the body be in a state of exertion or of repose.

In various parts of the system, beauty of configuration is obtained at the expense of power: the motive instrument is not placed in a situation where it can exert the greatest possible degree of force, neither is the lever it operates on the most advantageous for raising a given weight: still the effect is produced with the least sacrifice of convenience and beauty, and all apparent disadvantages are fully compensated by the combined action of different muscles. This is very evident when we reflect that the lever of the third order is the one most universally employed in the human body; the lever itself being the least efficient of all, yet allowing an arrangement of muscles, &c. about the bone, the most conducive to symmetry and convenience; while the want of absolute power from the use of this lever is compensated by the greater number of muscles brought into action, and the much greater variety of motions to be performed, in consequence of the peculiar relations of the bones.

In addition to the general attention to symmetrical arrangement displayed in the muscular system, there are very numerous instances of wonderful design exhibited in the combinations effected for the purpose of modifying and directing muscular action; and to these I more especially wish at present to refer. The study of these modifying causes opens a wide field of observation to the physiologist and rational anatomist, and impart to the muscular system a degree of interest sufficient to repay one for all the labour endured in gaining an acquaintance with its minutiae.

It has, no doubt, forced itself on the mind of every one who has attempted the study of anatomy, that the mere enunciation of a muscle arising at one point and being fixed to another, is, to say the least, a very dry and uninviting task for the memory. When such an enunciation is coupled with an apothegmatic sentence, declaring the use of the muscle, as a general rule, it is received as a thing to be believed because it is said, rather than as a proper consequence of the origin and insertion before stated. There is a great deal wanting to the establishment of a proper conclusion in the mind of the learner, and for a good reason,—the action ascribed to three-fourths of the muscles could not possibly take place, if it were not for the peculiar causes which modify and direct the exertion of their powers. These, both in books and public lectures, are as entirely left out of sight as if they did not exist, or rather as if they were utterly unknown to writers and teachers. The latter inference may be considered fair; for we believe that no man, knowing the circumstances, would pass them by in silence.

The circumstances modifying muscular action have been my favourite study for some years past: they have led to all the observations relative to the fasciæ, heretofore published in this Journal, and to all the discoveries made known relative to the capsular ligaments of joints, &c. in my Anatomical Investigations. I shall at this time take a view of the modifiers of muscular action, under the following heads:—

- 1st. Fasciæ and sheaths.
- 2d. Position in regard to bones; relation of muscular fibres to tendons.
- 3d. Modifying muscles.
- 4th. Modifying tendinous connexions.
- 5th. Special modifying constructions; annular ligaments, trochleæ, &c.

1st. *Fasciæ and sheaths*.—The fasciæ covering the extremities of the body will be the fairest exemplification of this part of our subject, because they are the most obvious and generally known. They are strong, dense, and inelastic fibrous membranes, stretching from the bones over the muscles, so as to give them an uniform external covering; and thus far the fasciæ were studied previous to my researches. In addition to the external covering, sheets or layers are sent off from the great exterior sheet, by which each of the muscles is enwrapped or included in a distinct sheath, the layers of which terminate on and around the joints for the formation of their capsular ligaments. In consequence, the muscles thus covered, instead of swelling during their contraction in a single mass, resisted only by the general external covering, contract and swell within their own particular sheaths besides; and these, being fixed to the bone as well as to the external fasciæ, direct the force of the muscle to the greatest possible advantage. The same circumstance of the sheaths for the individual muscles being formed from the great common fasciæ, enables us to understand how muscles, apparently very similar in place and appearance, are capable of performing very different actions.

Let us, to make the idea clearer, consider some of the muscles individually. The *sartorius* arises from the anterior superior spine of the ilium, and is inserted into the tuber of the tibia, its use being to cross the legs on each other, as is done by tailors when seated at work; whence the muscle has its name. But the *sartorius* is the longest muscle in the human body: its origin is very nearly over the median line of each thigh; to reach its insertion, it passes under the inside of the knee to arrive at the tibia. When the muscle contracts, it makes an effort to straighten itself; and, if it were not forced by some cause to contract in the line corresponding to its course while in a state of repose, it could not produce the movement above mentioned. What is this necessary modifying power? It cannot be the general or external fascia lata; because, if this were all, it might compress the muscle during its contraction, but could not prevent it from being drawn towards the middle of the thigh, or even from starting over the inner condyle of the femur. On examination, we readily discover the modifying cause to be the sheath, or double layer of fascia, in which this muscle is included; and this, together with the general fascia, so binds it to its place as to prevent it from starting in any direction, or producing inconvenience or deformity. The efficacy of the sheath is distinctly manifest in this case, but not more so than it is in all the muscles belonging to the extremities.

There are a few instances where muscles have their actions modified by the agency of a single sheet of fascia on their exterior, though in

these cases the term *aponeurosis* is most applicable to the modifying membrane. Such is the aponeurosis of the temporal muscle, the palmar and plantar aponeurosis, which are the only parts not belonging to the great general fasciæ of the body. The mass of the temporal muscle arises on the side of the skull, but a layer of muscular fibre, concerned in modifying the action of the whole muscle, arises from the inner surface of the aponeurosis, external to the beautiful tendon of the temporalis. These fibres, generally slighted or overlooked in the description, and almost universally cut away in the demonstration of this muscle, serve the purpose of aiding the aponeurosis to resist the swelling of the muscle, by contracting from its internal surface towards the tendon or the skull, at the same moment that the powerful part of the muscle is contracting and swelling outward against the aponeurosis. The aponeurosis of the palm serves a very important purpose, not only by strengthening the connexion of the bony structure, but by binding down all the tendons flexing the fingers, and compressing the interosseous and other palmar muscles situate beneath it. The plantar aponeurosis bears a very striking resemblance to the fascia lata in its structure, and relation to the muscles, and to the temporal aponeurosis in the manner of giving origin to muscular fibres. It forms three grand divisions,—in the first place, to embrace the central, external, and internal muscles of the sole; and, on the inner surface of the central portion, the flexor brevis digitorum pedis derives a very considerable part of its origin.

If the coverings of the scapular muscles were not to be traced continuously with the brachial fascia, we should be disposed to class them with the temporal, plantar, and palmar aponeurosis, as they are in various circumstances analogous to them, being much thickened by successive additions of tendinous fibres, and because the infraspinatus has a series of modifying muscular fibres arising from the inner surface of the fascia. This attachment of muscular fibres is very different from what we observe in the origin of the muscles of the fore-arm and leg, where a part of the main body of the muscle arises from the fascia. In the case of the temporalis and infraspinatus, it is a layer of fibres distinct from, and external to, the common mass of the muscle, and serving the purpose heretofore specified.

2d. *Position, relation of fibres to tendons, &c.*—The effect of position as a modifier of action, may be very fairly illustrated by the origins of the flexor longus pollicis, and the flexor longus digitorum pedis. The long flexor of the great toe, arising from the posterior and inner part of the fibula, and, passing under the inner ankle to its insertion, flexes the great toe in a line corresponding with the inner edge of the foot, or a line drawn from the under surface of the toe to near the centre of the heel. The long flexor of the toes, on the contrary, rising from the outer and back part of the tibia, and running to be inserted in the smaller toes, contracts so as to draw them inwards, or towards a line obliquely crossing the sole of the foot from the outer to the inner side. It would be natural enough for one who was unacquainted with the structure, to expect that the common flexor of the toes should rise from the bone most immediately in a line with the toes to be flexed;

that the flexor of the great toe should come from the tibia, and not from the fibula; and the contrary of the common flexor. We shall hereafter see some additional modifying circumstances connected with these two muscles, of great importance and beauty. An instance of a corresponding arrangement may be observed in the relative positions and actions of the extensor longus, and the extensor brevis digitorum pedis. Other instances of the adaptation of situation to the direction of action, will present themselves to any one engaged in studying the subject.

The relation of muscular fibres to the tendons through which they are to act, is another admirable provision for the modification, or rather the direction of their action. This is beautifully seen in all the penniform muscles, especially those belonging to the motions of the foot. They arise by narrow origins, and their fibres run obliquely outwards to receive a tendon on the edge of the muscle, and not at the inferior extremity. Hence, as the successive portions of these muscles come into action, the motion of the foot is effected, and the whole tendon is more and more closely drawn in towards the bones. From the very nature of the space the tendons of the upper part of the foot have to traverse, they could not under any other circumstances act to advantage, although they were furnished with fasciæ and annular ligaments. Another excellent instance of modification, owing to the relation of fibre to tendon, may be observed in the semi-membranosus, one of the great flexors of the leg on the thigh. The origin of this muscle from the upper and posterior part of the tuber ischii, is a broad flat tendon, lying between the biceps and semi-tendinosus. As it is passing through the thicker part of the thigh, this flat tendon has the fleshy fibres attached to it, beginning by short fibres running obliquely, gradually growing thicker and longer for a few inches; then shortening again, with the same obliquity of fibre, the muscle receives the terminal broad tendon, which is to be inserted into the inner and back part of the head of the tibia. Hence this muscle is able to co-operate in the flexion of the leg on the thigh, bringing it directly backwards, and at the same time, by its figure, aiding in giving symmetry to the thigh; whereas, if its fleshy fibres were direct, or corresponding to the course of its origin and insertion, it could do neither.

3d. *Modifying muscles.*—This is a very extensive source of modification to muscular action, and the design of the modifying portions is unequivocally evident. We shall select a few of the most obvious instances as sufficient for the present. The long flexor of the thumb arises on the upper part of the radius below its tuber, and for a considerable distance along that bone towards the wrist. The fibres are necessarily penniform, and the tendon received on the outer edge of the muscle. According to what we have observed on the penniform muscles, this arrangement will draw the tendon more immediately towards the bone; and, if this arrangement were the whole of the muscle, the flexion of the thumb could not take place as advantageously as it now does. But a modifying muscle, having direct fibres, and terminating in a distinct tendon acted on by all its fibres at once, arises from the internal condyle of the humerus, and is fixed into the commencement of the tendon belonging to the radial or penniform portion; and, as its

origin is much more favourable to the proper flexion of the thumb, it modifies the action of the lower part of the muscle. It may be said that this modifying portion is not always present: this may be said of various parts whose uses are unequivocal; but this part of the muscle is not frequently absent, perhaps once in ten times, if so often.

Another and more striking instance of modifying muscle is found in the second head of the biceps flexor cruris, the only muscle inserted into the fibula for the flexion of the leg on the thigh. This biceps derives its principal origin from the tuber ischii, in immediate company with the semi-tendinosus, which goes to the inside of the leg. Whoever examines the origin of the biceps, and observes the obliquity of this first head, compared with its insertion, will see that, if this greater part of the muscle were alone, it would rather pull the leg towards the inside, like the semi-tendinosus, than towards the outside. But a second portion of muscle comes off from the outer part of the posterior surface of the thigh-bone, beginning below the insertion of the glutæus maximus into the rough line. This second head has its fibres running obliquely outwards and downwards, and it lays hold of the proper tendon of the biceps on the inside. When the larger portion of the muscle contracts, this short head operates on the tendon, drawing it in the immediate line of the bone; thus correcting the obliquity of flexion which would be produced, if the upper portion coming from the tuber were to act alone.

A modifying structure, having considerable analogy with this, exists in the relation of the gastrocnemius and soleus. The gastrocnemius, arising from the condyles of the femur, is nearly immediately in a line with the os calcis, and, by the projection of the condyles, has great power in commencing the extension of the foot on the leg, though it could not, from the very circumstance of the slenderness of its origin, suffice to sustain much of the weight of the body. The soleus, arising from the head of the fibula and posterior and upper part of the middle of the tibia, and acting on the common tendon fixed to the os calcis, completes the action, draws the heel directly upwards and inwards in a line with the bones; and thus the whole muscle is enabled to sustain a great weight.

The last instance I shall mention of modifying muscle, is the accessory of Sylvius, in the sole of the foot. The situation of the long flexor of the toes has already been referred to, and it has been stated that the object of the flexion is to bring the toes downwards and inwards; but, in passing under the os calcis from the posterior part of the tibia, the tendon passes rather obliquely across the sole, and would draw the toes too directly or violently inwards. This evil is prevented by the intervention of a small but strong mass of flesh, arising from the sinuosity on the inside of the os calcis, and terminating by an oblique insertion into the tendon of the long flexor, just where it separates into four tendons for the lesser toes. This accessory muscle, contracting in the direction of a straight line drawn through the middle of the sole, at the time when the long flexor tendon is drawn immediately inwards, produces that modification of action which is intermediate to what either portion would separately produce.

4th. *Modifying tendinous connexions.*—These will be sufficiently obvious to every anatomist: it will be enough to refer to a few of them. Among the most important may be mentioned the splitting of the tendon of the obliquus internus abdominis, which, with the external, oblique and transversalis, constitutes the sheath of the rectus abdominis. This muscle, in consequence, has its power of flexing the trunk vastly increased, inasmuch as it is affected by every degree of contraction which occurs in the other abdominal muscles, at the same time that its own contractions are performed. In addition, this muscle is broken into portions by tendinous matter, which gives it something of the character of several distinct muscles.

There is a strong tendinous connexion existing between the tendon of the long flexor of the great toe, and the tendon of the long flexor of all the other toes. This tendon enables the flexor of the great toe to participate in the modifying influence exerted by the accessory muscle of Sylvius, recently mentioned under the third head. Various other instances will be recollected, more or less analogous to these.

5th. *Special modifying constructions, &c.*—The most beautiful of these are the trochlea in the orbit of the eye for the obliquus superior, and the hook on the internal pterygoid plate of the sphenoid bone for the circumflexus palati; both of which are so obvious, as to need nothing beyond a mention. The interposition of the patella, by which a pulley is formed at the knee-joint, and of the sesamoid bones, occurring in the tendons of the short flexors of the thumbs and great toes, are also well known.

The annular ligaments of the wrist and ankle are also peculiarly worthy of attention, as modifiers of muscular action, and without which our present construction of muscles would be almost useless. If any one wishes to ascertain how far these instruments direct the action of muscles, let him cut them through, and he will at once see, from the starting forwards of the tendons, that, without the aid of these annular ligaments, the motions of the extremities could not be properly effected. The same principle is resorted to by nature for confining the tendons of the fingers in place, only that in this case the material used is much stronger than that of common annular ligament.

I have not leisure to pursue these investigations further at this time, and am conscious of their manifold imperfections; yet I hope that these remarks may not prove uninteresting to those who are engaged in the study of anatomy, because they appear to me to have a very useful bearing on the physiology and pathology of the muscular system. Some happier genius, by a more extended inspection of all the existing relations of the muscles, may be enabled to explain very many circumstances which now appear dark and difficult, concerning their functions.

ART. II.—*On Periodicity in the Actions of the Animal Economy during Health and Disease.* By JOHN BELL, M.D. [From the *Philadelphia Journal*, No. 2, New Series.]

* * *

Of the Morning.—WE know that most diseases remit in their violence in the morning, agreeable to the axiom, "*Levato sole, levatur morbus.*" This remission is so marked, that, in mucous and intermittent fevers, especially the tertian and double tertian, persons, in agony during the night, have got up at sunrise, and regained strength enough to go about. Insensible perspiration is besides abundant, and brings great relief: hence dropsical effusions and œdema of the legs are smaller. The hectic fever ceases at this period alone of the twenty-hours. The nocturnal repose of the functions of the nervous system, brings likewise a remission in most spasmodic diseases. The greater number of the phlegmasiæ of the mucous membrane, such as catarrh, croup, &c. are also diminished in violence at this time. In fine, there is scarcely a malady which has an exacerbation in the evening, that has not an intermission in the morning. Asthenic diseases even are milder, on account of the organisation gaining more energy at this epoch.

But this same morning vigour becomes the cause of the invasion of several sthenic diseases. In general, angina, vernal quotidian or tertian fever, and simple synocha, are evidently aggravated in the first hours of the day. Ophthalmiæ are more acute; and the hæmoptysis of young persons more readily comes on at this time; as also the sweat of phthisical patients, hysteric swellings, and worms, (no doubt on account of the emptiness of the intestines,) and pyrosis, or water-brash. In fevers called malignant, especially in typhus, there are two exacerbations daily, but that of the morning is, according to Hufeland, more violent than the evening one. So also wounds, ulcers with gangrene, carcinomas, and phlegmons, receive an augmentation of heat, pain, and tension, on the return of the sun above the horizon.

Of Mid-day.—In proportion as the sun's elevation increases, bilious fevers, strong nervous emotions, as in mania and hydrophobia, become aggravated. Sauvages has called *solar mania* one of those affections which only came on in the heat of the day, and which entirely disappeared at night. He also mentions a woman who became partially deranged precisely at one hour after noon. The phrenitic become violent towards two or three o'clock in the afternoon, with chills and remarkable exacerbations. Musgrave cites an acute arthritic cephalalgia which came on daily at twelve o'clock, and Sauvages furnishes us with an analogous case. We generally find the eruption of the distinct small-pox to commence at this hour. Coma vigil, typhomania, calenture, the violent delirium of the complicated remittent fevers of warm climates, causus, tetanus, and trismus, erysipelas sun-stroke, are at times manifest before noon; but always much more during the heat of the day than at other times. Cholera morbus, spasmodic vomiting, colic, volvulus, and many gastric tertian fevers, have their paroxysms at noon. Finally, hepatitis, gastritis, the bilious diarrhœas of summer in

men of an irritable habit, are more especially augmented towards the middle of the day.

Of Evening.—It was long ago remarked by Fernel, that all quartan fevers came on after noon, quotidians at early morn, and tertians towards mid-day. But it is more particularly in the evening that the paroxysms of a great number of diseases are produced. All catarrhal affections, heavy phlegmonous pains, inflammation of the organs of animal life, or of relation, are astonishingly aggravated in the evening; owing, no doubt, to the debility of this external life. So also cephalalgia, or sick headaches, are then increased; and comatose affections and apoplexies only strike in the evening or at night. Paralysis, lethargy, syncope, sudden attacks of hypochondriasis and hysteria, slow nervous fever, the oppression from dropsy, articular and rheumatic pains, are necessarily aggravated by this debilitation of the sensitive life. An intermittent febrile hemiplegia has been known to commence at four o'clock in the afternoon, and to cease at six in the morning, and to be cured by the bark; and a periodical cough, beginning at seven in the evening, cut short by opium. It is especially in the evening that suppurative fever comes on with the wounded. Jactation, restlessness, are peculiar to a number of nervous lesions at this period. When hæmorrhages, such as epistaxis, hæmorrhoidal discharges, come on at these hours, they are almost always the result of a spasm, which, without doubt, causes that insupportable anxiety experienced by consumptive persons who have a vomica. Cutaneous diseases, itch, herpes, chilblains, are more troublesome in the evening.

It might at first be thought that the fatigues of the day, the exercise of the senses, the introduction of fresh chyle into the blood from the nutriment previously taken, and even the irritation from remedies, dispose the animal economy to a general exacerbative movement: but, in reply to this, it may be alleged that, even though the invalid sleep through the day, and adhere to a most rigorous regimen, hectic fever, for example, will come on at the accustomed hour. We find, on the other hand, that diseases of the throat, and some other matinal affections, are dissipated in the evening.

In general, the disorders of the sub-diaphragmatic organs in old men, such as those of the urinary passages, hæmorrhoids, gout, melancholy, dysentery, enlargements and obstructions of the viscera, as of the spleen and mesentery, are more particularly aggravated at this epoch.

Of the Influence of Night.—It is well known that sthenic affections, exacerbating in the day, have a remission in the humidity, cold, and obscurity of the night; and that, on the other hand, the diseases which are milder during the day, such as fevers, mucous phlegmasiæ, catarrhs, croup, affections of the lymphatic system, dropsy, cachexia, asthenic complaints, and paralyzes in general, are aggravated in the night. There are, however, certain states of our organs at particular hours, independent of the sensible properties of the atmosphere, or of light and darkness; and hence, as remarked by an ingenious writer,* to whom I am largely indebted on this occasion, the human body is, in this

* VIREY.

respect, like a living clock, wound up by nature, and kept a-going by the rapid movements of our planet and the sun.

Humboldt tells us of a certain countess at Madrid, who lost her voice at sunset, and only recovered it at early dawn. This paralysis of the recurrents of the eighth pair disappeared in the climate of Naples, and reappeared in that of Rome. Other nocturnal paralyses, deliriums, and vertigos, have been observed to come on at the same epoch, which renders probable what Aristotle relates of a tavern-keeper at Tarentum, who was very rational during the day, but became insane regularly on the approach of night. The hemeralopses at this time experience very sensibly that singular collapse which prevents them from seeing; while those labouring under nyctalopia, on the contrary, see better in a feeble light: and we find at this period some headaches begin, and others cease. "A woman," says Baillou, "fell into a state of insensibility at sunset, and recovered her vigour in the morning."

After this general view, it becomes us to notice the phenomena observable in the several hours, or stated periods of the night. The oppression of incubus, for example, only comes on in the first sleep; when also the suffocating feeling from ascites is most distressing. It is the same with the venereal pains of the bones, rheumatism, and scurvy. Asturian, leprosy, croup, catarrhal affections, whooping-cough, and periodical cough, are greatly aggravated during this same period. It is then also that gangrena senilis, passive hæmorrhages (so called), petechiæ, and the danger from adynamic or low fevers, and contagious and pestilential ones, are increased, on account of the general depression in the animal economy.

Towards two or three o'clock in the morning, when the pulse rises after the first sleep, another order of actions begin. Sydenham was astonished to find the gout make its attack so exactly at this time. Floyer makes a similar remark on asthma. Dropsical spasms, violent palpitations, which awake the alarmed hypochondriacal, or frightful dreams, are then experienced: it is then that somnambulists rise and move about; whilst the wakefulness of old men, and that produced by slow fever, come on. The greater number of epilepsies, the paroxysms of which supervene in the night, declare themselves at this period.

After this state of spasm, as it may be termed, there is an excitation not less remarkable. The consumptive then have sweats; gastritis and hectic fevers are exacerbated; the aphthæ and miliary eruptions of children then effloresce; the critical sweats in mucous fevers, different eruptions, tinea, and others, begin, or are augmented. The dyspeptic invalid, who awakes perchance at midnight, or a short time after, and feels his tongue and mouth moist, must be often surprised at the change in his feelings at early morn, when the same parts are rough, parched, and loaded. The most salutary critical perturbations are then brought about; for they are prepared by sleep, which leads to a morning remission. Winter, old age, lymphatic temperaments, are aggravating circumstances in nocturnal affections.

Let us conclude these remarks on the nocturnal period, by repeating the observations of Ramazzini, Home, and Pringle. The first tells us of an epidemic disease in 1691, the symptoms of which became alarming

after sunset, to such a degree, that the sick were in a state of extreme depression, and almost dying during the night. The two last-named writers have transmitted to us the history of an epidemic remittent fever which prevailed among the English troops in Flanders, in 1743, and which presented the same characters. There was a regular and almost entire remission of the symptoms during the day; no complaints made; the pulse not much accelerated: but, on the approach of night, uniformly and without any sensation of coldness, the fever was aggravated, and the symptoms became so intense, that the patient was often delirious. In the morning, again, the pulse did not indicate the danger which was just escaped.

As respects the proportionate mortality in the diurnal revolution, Virey tells us, in his Thesis, that the greatest number of deaths happens at early morn, rather after than before sunrise; that there are more in the day than in the night, by a sixth, and that, in the evening, the greatest mortality is on the approach of night. More than one-half die at different hours, according to the season, and the rising or setting of the sun. In summer, in the months of June, July, and August, the mortality is sensibly increased towards two or three o'clock in the afternoon; owing doubtless to the heat, since this epoch is healthy in the cooler months.

The periods in which the fewest deaths occur, are from ten o'clock at night till three in the morning, corresponding to that of the first sleep; as also those from eight to ten in the morning, and from twelve to one in the day. It would follow from this that the inauspicious hours (*horæ infaustæ*) for the sick, must be also the least favourable to persons in health; the same causes acting, we presume, on all. It is probable, moreover, that, as nature determines favourably or unfavourably by the periodical returns, which we have seen correspond with certain hours in the day, people are most liable to perish at the hour when the disorders with which they are attacked has its exacerbation.

The inferences to be drawn from this knowledge of the periodicity of the functions of the animal economy in health and disease, are such as to admit of the greatest variety of application in hygiene, pathology, and therapeutics. We have seen that each period of the diurnal revolution has a peculiar character, marked by the excitation of a system of organs in relation with it.

Sleep during the night, wakefulness in the day, an active matinal life, relaxations in the evening; such is the natural order of things, and the man of nature, the child, and the countryman, who are obedient to these instinctive impulsions, commonly enjoy vigorous health. They who have been enervated and enfeebled by long watching, exercises, and exciting pleasures, prolonged through the evening on to the midnight hour, can only hope for a restoration of health, juvenile strength, and mental vivacity, by retracing their steps, and following the course pointed out by nature, and sanctioned by the experience of all ages and nations. The old man who sleeps but little, and the dissipated and indolent one who sleeps long in the morning, dislike retiring to rest until the night is somewhat advanced; while the child, who goes to

sleep early, awakes at the dawn. The former accelerate the approach of the evening and decay of life by such means; the last keeps up the freshness and beauty of its morn.

The hour of repast cannot be a matter of indifference, and ought to be regulated by the periods of the night and day, as well as by the pursuits, age, and constitution of the individual. It is known that nutriment taken in the evening produces an accumulation of mucosities or glairy juices in the intestinal canal. If, then, we may presume that other periods make other humours predominate by digestion, (bile, for example, taking the ascendancy in the heat of the day,) the morning repast will be the most salutary and renovating. Would it not be better for the old man to take his meal in the morning, and the one of a lymphatic constitution in the heat of the day? Our advice on such subjects must, however, be modified by the condition of the digestive organs: thus, in the states already mentioned of morning debility of these parts, some time might be allowed to elapse after rising, and a tonic mixture or infusion drank, to produce a slight reaction before food is taken. So also in chronic periodical affections, which correspond with the physiological excitations in the diurnal cycle, we might hope to remove them by inverting the usual order in the habits of the individual, in reference to diet, exercise, and even sleep. This means of relief now suggested has been too much overlooked in the treatment of chronic diseases, which are assailed in a careless manner, without physiological guidance. The difference in the hours of attack of any disease will materially affect its diagnosis by the intelligent physician. An epilepsy, for example, the paroxysms of which come on constantly in the evening, will be found to have a different cause from the epilepsy habitually coming on in the morning, and would indicate a different method of treatment; the first being probably more nervous than the second.

We ought also to inquire whether there does not exist a certain affinity between night and cerebral affections, by which their violence is augmented; and, if the diseases of the thorax are not aggravated in the morning, and those of the stomach, liver, and spleen, governed by the heat of the day; and the disorders of the hypogastric viscera by the evening, as many facts would seem to announce.

How vitally important is the study of those opportune pauses, or remissions and intermissions, which must often be taken advantage of at the very hour, as in periodical fevers; for, if the occasion be once missed, it may never again return, and the patient will be carried off in the next paroxysm. The same advantages attend a careful observation of the daily periods of many other desolating diseases, so as to learn their tendency, returns, critical perturbations, the precise hour of hemorrhages, evacuations by sweat, urine, stool, expectoration, &c. If we neglect these circumstances, we know not the time when a remedy can be given with advantage, and may as often increase the disturbance in the animal economy as tranquillise it. By knowing whether diseases, such as some contagious ones, pursue a determined course, and have a certain duration, in despite of all therapeutical agents, we remain satis-

fied with moderating the more violent symptoms, preventing the disorganisation of parts or new formations, without sinking the system too low for the performance of its necessary functions. On the other hand, in diseases of habit, as in prolonged intermittent fevers, some epilepsies, various nervous affections, we attempt the revolutionising or perturbing plan, to break up the diseased associations. We are at the present time unhappily too artificial in our views of disease. If we bring our therapeutical phalanx into action, it is all we ask; forgetting that we may prostrate without destroying, and drive away the enemy from its lodgment, only that it may take another still more disadvantageous to us. If we are to be the servants of nature in the cure of disease, it behoves us to watch with assiduity its augmentation and decline, its exacerbation and remission, and to distinguish its natural periods from those caused by our own presumptuous haste or ignorance. This is a copious theme, on which, perhaps, I may hereafter be tempted to dilate.

Every medicine is not equally indicated at every hour; a truth not sufficiently dwelt on by writers and teachers of *materia medica*. Thus, narcotics, sedatives, &c. would, except in extreme cases, be misplaced in the morning, when all the faculties tend to wakefulness; but these same remedies will have a more profound and salutary action in the evening, because the powers of nature then tend to repose and sleep. Hence Sydenham always prescribed an opiate on the evening of the day when he had administered an emetic or a purge; and this practice is very generally imitated, to calm irritation.

The morning remission is generally the chosen time for the greater number of evacuants and alteratives, vermifuges, astringents, and tonics, as the first passages are then most empty of alimentary substances.

Baths, lotions, emollients, and cooling remedies, have a better effect after the great heat of the day on the muscular, fibrous, and nervous systems: hence we find that the ancients used the bath after their *cena*, or supper. Bleeding or depletion of the venous system, especially if there is a threatened congestion of the brain, is better in the evening. But, if there be depression or prostration of power, as in low fevers, we must, as the night advances, apply blisters and rubefacients, and urge the use of stimulating and cordial remedies, so as to keep up the action of the system until after midnight, and carry thereby the patient through the critical hours immediately succeeding it, as it is then we most frequently see him begin to sink, and, if unaided, he becomes more and more depressed until morning, when death closes the scene.

CRITICAL ANALYSIS
OF
ENGLISH AND FOREIGN LITERATURE,
RELATIVE TO THE VARIOUS BRANCHES OF
Medical Science.

*Quæ laudanda forent, et quæ culpanda, vicissim
illa, prius, cretâ; mox hæc, carbone, notamus.*—PERSIUS.

DIVISION I.

ENGLISH.

ART. I.—*Researches into the Nature and Treatment of Dropsy in the Brain, Chest, Abdomen, Ovarium, and Skin; in which a more correct and consistent Pathology of these Diseases is attempted to be established, and a new and more successful Method of Treating them recommended and explained.* By JOSEPH AYRE, M.D. Member of the College of Physicians, &c.—8vo. pp. ix. 242. London: Longman and Co. 1825.

AMONG the multitude of works, of all denominations and sizes, that come before us for examination, it is refreshing to meet with one which enables us to lay aside, in a great measure, our critical weapons, and to present it to our readers, without being compelled to notice omissions, defects, or errors, which to pass by in silence might imply, on our parts, either ignorance, neglect, or wilful partiality. The duty of the professional critic is at all times an unpleasant one, independently of the toil and labour which necessarily attend a conscientious discharge of the office; and it is, indeed, gratifying to us when we meet with a performance which enables us to assume the humble, but much more agreeable, task of analysing instead of criticising. We do not hesitate to affirm, that the present work is one of this kind. That the doctrines it contains are absolutely novel, we do not assert; that they may not be insisted upon a little too pertinaciously, and occasionally carried a little too far, we will not undertake to deny: but that the pathological views of Dr. AYRE are sound; that they are, generally speaking, founded on fact; that they are perspicuously detailed, and ably illustrated, we are fully persuaded: and, moreover, we venture to pronounce that this work will hold a permanent rank among the best monographs of modern times, and will shed a beneficial influence on the treatment of this particular class of diseases.

It will be our business, in going through this work *seriatim*,

to endeavour to show that this favourable opinion, as well as the slight qualifications with which we have accompanied it, are the result of a careful perusal of the book itself, of which we hope to be able to give so full an account as to lead those who are at a distance from the best sources of information to review and reconsider those doctrines relative to dropsical complaints, which they most probably have imbibed in the course of their medical education: for all systematic writers, in the classification of these affections, evidently display a want of knowledge of their true character, inasmuch as they make dropsy a *disease*, instead of what it most generally is, merely the *effect of some other morbid condition*: but of this more will be said presently.

Dr. Ayre's work has the additional merit of being short. To us especially this is a great boon; and, when we consider the little time professional men are enabled to bestow upon medical literature, it is a merit of no mean kind.

The volume is divided into four chapters: the first treats of the pathology of dropsy; the second describes the various forms of the complaint; the third is devoted to their treatment; and the fourth consists of cases and dissections. A short Preface introduces the work, the principal point of which is to assert the originality of the author's opinions. This is in some degree rendered necessary by the very striking agreement between the doctrines of Dr. Ayre and those advocated in the *Dictionnaire abrégé des Sciences Medicales*, which is dated in the year 1823, and therefore, in justice to our author, we subjoin the following passage:—"Of the general views which I have given of this disease, I must be allowed to observe, that, under the amplest opportunities for verifying them, they have been entertained and acted on by me for a considerable time, and, during the last five years, have formed the substance of an annual lecture to a class of clinical students."

Chapter I. *on the Pathology of Dropsy*.—Dropsy, observes Dr. Ayre, is merely the effect of disease, and its cause must be looked for in that particular condition of the solids by which the effusion is produced. The nature of that morbid state has been variously explained; but the three principal hypotheses that still hold their ground are the following:—1st. That dropsical swellings arise from want of energy in the absorbent vessels; 2dly, from an increased exhalation of the same fluid, from want of tone in the exhalants; and, 3dly, from mechanical obstruction to the free return of blood by the veins, in consequence of schirrus or other disease. These views our author combats in the following manner:—1st. The opinion of a want of tone in the absorbents causing dropsy, is contradicted by the emaciation of the body,—that is, the absorption of the

adipose matter still going on; by the readiness with which the absorbents take up mercury in this condition of the system; by the total absence of swelling or accumulation of the fluids in the joints or bursæ mucosæ; and by the ready absorption of ecchymosed spots in anasarcaous limbs. Now, we are free to confess that these proofs of the undiminished power of the absorbents are not fully satisfactory to our minds, and would have but little influence upon our opinion, if the facts and reasonings which our author subsequently adduces in support of his views were not more forcible and convincing; for, towards the termination of chronic diseases ending fatally, when emaciation is the most extreme, œdema, evidently from want of power in the absorbents of the extremities, actually does occur almost universally. Nor does it appear a necessary consequence that, because the absorbents of any cavity,—the chest or abdomen, for example,—are defective in power, those of the surface, or those lining the cavities of joints, should be similarly circumstanced: and, with regard to the removal of ecchymosed spots, such occurrences are not always met with; and, when they are, they generally prove that the disease is yielding; so that a supporter of the old theory might be inclined to say that the absorbents had reacquired their lost tone.

Our author's objections to the opinion of dropsy being caused by a want of tone or energy in the exhalants, are much stronger. We conceive this opinion implies, either that the fluid of dropsy may escape *mechanically* from the exhalants, and that such fluid may be identified with another fluid which is *secreted*; or that, if the fluid of dropsy be *secreted*, that secretion may be increased in quantity under a *decrease* in the energy of the secreting vessels. The validity of these objections rests upon the supposed admission that exhalation is identical with secretion.

With regard to dropsy arising from a mechanical obstruction to the blood's return through the veins, by the pressure of parts of a diseased viscus on the vessels passing through it, Dr. Ayre remarks that, in the instance of the liver, which is usually considered to be productive of dropsy from this cause, there are numerous examples of such states of that organ, as well as of the spleen, &c. without any such effusion; and, moreover, when removed by tapping or other means, the dropsy has not returned, though no change has been effected in the structural condition of the liver. Further, if the discharge depended upon a mechanical cause, the water should in every case, be of a uniform fluidity, and the progress of accumulation should likewise be uniform; neither of which circumstances always, or even often, take place.

Our author next proceeds to combat the conclusions deduced from the experiments made by LOWER of tying the vena cava of

a dog; and we give his observations on the experiment in his own words:—

“ The inferences, however, drawn from the experiment are fallacious; for the experimenter, besides overlooking the agency of effects incidental to the operation, has committed the too-common error of reasoning from the lower animals to man; and therefore has assumed, because ascites occurred in the dog, that it would also have happened in the human subject. But there was an effect, here overlooked, which was to be expected to take place in the abdomen of the dog, from the injury done to the surrounding parts by the operation itself, and which would be quite independent of any effect arising out of the experiment. In the human subject, this effect would be the highest form of inflammation, by which coagulable lymph or pus would be poured out upon the surface of the peritoneum. There would, therefore, be inflammation excited in the abdomen of the dog; but, as the lower animals are less easily acted on than man, the inflammation would in this case be in a lower degree. But every degree of inflammation has its particular product. The highest occasions a discharge of pus, whilst the lowest, when seated in a serous membrane, is a larger portion of its proper serous fluid. This, therefore, might be the product of the inflammation which was produced incidentally by the experiment in the abdomen of the dog; and it would be just as reasonable to regard the coagulable lymph in the human subject, which would result from such an experiment, as an effect of the mechanical obstruction, as to consider the fluid effusion in the dog to be so.” (P. 7—9.)

Some other observations, all tending to confirm this view, lead to the following conclusion:—

“ From these facts, therefore, and others to be presently noticed, it appears to me conclusive, that the dropsical effusion, in whatever part it may be seated, does not arise from any want of tone in the exhalant or absorbent system, or from any mechanical obstruction in the liver or other viscus; but that it proceeds from a morbid action in the cellular or serous tissues; and that this action, as we shall now proceed to show, is allied in its nature to inflammation.” (P. 15.)

In support of this view of the subject, our author calls to our recollection, in the first place, that all the phenomena belonging to cases of watery effusion, under other forms of inflammation, are common to those of dropsy: the fluid secreted in consequence of a blister, in some cases of erysipelas, and in pemphigus, afford his illustrations. Again, in some cases of acknowledged inflammation, the fluid varies much in its consistence. Such also is the case in dropsy, sometimes even at different times in the same patient. To these views, however, there are objections. Our author first states, and then answers them. The first objection applies to the total absence of pain in ordinary cases of local or general dropsy. This is accounted for from the little sensibility of the serous membranes under a state

of chronic inflammation; so that death shall often ensue from considerable chronic diseases of those parts, without having been denoted by any previous pain during life. The other objection, arising from the sudden effusion of tears or saliva, under certain conditions of the mind or stomach, we consider so frivolous, as hardly to have merited an answer.

In favour of his peculiar opinions, Dr. Ayre next calls in the aid of analogy. That the morbid action producing dropsy is allied to inflammation, he endeavours to show, from the circumstance of its obeying the same laws: for example, it is liable to metastasis, and is, in many instances, remedial of its cause, as is the secretion of a mucous fluid in mucous membranes, or the effusion of coagulable lymph, or of pus, in the highest degree of inflammation. The examples of these remedial effects in dropsical disease, are the cessation of pain in the extremities on their becoming anasarcous, and of an effusion which has begun to take place in a cavity being temporarily suspended, particularly in ovarian dropsy or in hydrocele, where the fluid continues often for many months, or years, without any addition being made to its quantity: as is the case, also, in other inflammations. When a higher excitement is induced, the serous effusion ceases: this is effected by design in the cure of hydrocele, and is often the effect of accident, especially in the ovarian dropsy. An example of this latter kind is given, which, as it occupies but a short space, we shall extract.

“It was the case of a female, who, for the first time, was tapped for an ovarian dropsy, which she had laboured under several years. The discharge through the canula having suddenly stopt when about two-thirds of it was drawn off, the surgeon introduced his probe to remove the obstacle. In doing this, he produced a slight hemorrhage, and some degree of pain; and, for several days succeeding, there was much constitutional irritation and general fever, with considerable risk to the patient's life. After a difficult struggle, she recovered; and with the agreeable result of having the ovarian dropsy so radically cured as to be now, after seventeen years, still free from it.” (P. 25, 26.)

In abdominal dropsy, continues our author, the same consequence would ensue, if increased excitement could be safely brought on in the cavity: but, as this is not the case, when it does take place, a fatal result generally ensues. But sometimes the progressive increase of disease may produce the same effect: that is, a patient may be relieved from his dropsy some weeks, or even months, before his death, in consequence of the excitement of the peritoneal covering, which was merely sufficient, in the first instance, to pour out the serous fluid, becoming increased to a degree that is incompatible with the serous secretion.

Here we would ask, is there not some altered state of the

lymphatic system also to be taken into the account; or how is the serous fluid disposed of? This, and some other difficulties which occur to us, would induce us to believe that, though inflammation is the fundamental principle which leads to dropsical effusions of the larger cavities especially, there is something peculiar in the nature and character of that inflammation; that the lymphatic system, either primarily or secondarily, acts some part in the progress of the affection; and that it is not merely a difference in the degree of common inflammation which constitutes the essential character of the disease.

The point which Dr. Ayre contends to establish, of the disappearance of a dropsy whilst the original disease continues to run its course unchecked, is illustrated by the detail of two cases. The first is that of an adult, who, in consequence of the indulgence of intemperate habits, became afflicted with ascites, which was ultimately removed through the kidneys: he survived a twelvemonth, without any return of his dropsical symptoms; and, on dissection, the peritoneal covering of the liver and adjoining organs were of a colour almost perfectly white, and of the thickness of chamois leather, and this appearance pervaded the whole abdomen; whilst the viscera generally were so firmly united together, that not even careful dissection could disjoin them. The second case is that of a child, who had ascites as a consequence of mesenteric disease: the water was removed by the use of diuretic medicines, but the child died in a few weeks. The appearances on dissection were similar to those above described.

From these and similar examples, our author assumes—

“ That ascites, when proceeding from some visceral disease, (and the principle applies to hydropic effusions from the presence of disease in other cavities,) does so by the gradual extension of the chronic inflammation of the internal cellular or serous tissues of the diseased organ, to its outer external covering; and that, commencing here as from a point, the serous or hydropic inflammation is progressively propagated through the whole of the serous membrane of the cavity. By the disease within the cellular tissue of the diseased viscus increasing, a corresponding increase in these cases will ensue of the disease on the surface of the membrane investing it; until at length a susceptibility to take on a higher action is induced, which only requires any slight occasional cause to establish. Under this condition of an increased excitement in the peritoneal or other serous membrane, coagulable lymph is discharged into its cellular tissue, and a thickening of it takes place; until at length the operation of paracentesis, which in the early stage of the disease was attended with only inconsiderable inconvenience, becomes an adequate cause of a still higher inflammation, which terminates perhaps in suppuration; and, in the post-mortem examination, the serous fluid is found so mixed with coagulable lymph and purulent matter, as to give

a whey or milk-white appearance to the mass. The quantity of the serous fluid in these cases is generally small, when compared with what was accumulated in the intervals of former tappings; for the vascular excitement, which occasions the discharge of coagulable lymph, is destructive of that which pours out the serous fluid." (P. 29, 30.)

Another train of arguments, founded upon observations on the quantity of serum contained in the urine, next engages our attention. They have been previously pointed out by Dr. WELLS and Dr. BLACKALL; and to these Dr. Ayre has added other conclusions, the results of his own practice, according to which it appears that, when dropsy is under a subacute form, and of the anasarca kind, it is idiopathic; and in this state, as well as in the symptomatic form, though in a less degree, the urine is found to contain serum. The quantity of this ingredient denotes, according to our author, the amount of the serous inflammation: it exists, therefore, in the greatest abundance where the effusion into the skin precedes the local dropsy; and, on the contrary, is in smaller quantity where the anasarca succeeds to the other form, since this order in their appearance indicates the existence of a local disease, as a cause both of the local and general affection. It is, therefore, in the subacute and idiopathic forms of dropsy that this state of the urine prevails the most; and it is in this form, also, that the defective action of the kidneys, skin, and bowels, are most considerable. In dropsy following scarlatina, which is idiopathic, there is generally the greatest quantity of serum, and with it the most decided marks of vascular action. But, adds Dr. Ayre, the urine is also found to contain serum in cases of anasarca, when symptomatic of visceral disease; for the disease of the viscus which is the cause of the local inflammation in the serous membrane of the cavity, may produce an adequate degree of that general vascular excitement which gives rise to a discharge in the cellular tissue.

Upon the above passage we are compelled to remark, that it is neither altogether free from confusion nor contradiction; and we are not quite clear that we comprehend the exact tenor of the doctrine intended to be deduced from it. Indeed, our author himself appears to be aware that, practically, many difficulties will occur in the application of the above principle; and more especially we should conceive, where anasarca only is concerned. Dr. Ayre, therefore, in order to render his views as clear as possible, enumerates four distinct conditions of the system by which its occurrence—viz. that of serum in the urine—is regulated: these we insert.

" 1. It is in the greatest quantity where, along with a copious and continued effusion, there is a nearly corresponding quickness in the absorption of the serous fluid, and which will occur most commonly

when the general excitement precedes, and is a cause of, the local one.

"2. It is consequently, *cæteris paribus*, in a less quantity where the general hydropic excitement of the system succeeds, and is dependent on, the local one.

"3. It is absent, or found only in a minute proportion, in all those cases where the local increased action in the serous membrane is only partially extended to the rest of the system, and where the absorption from the part is inconsiderable; as particularly happens in the encysted kinds:—or,

"4. Where the effusion of the serous fluid has proved remedial of the inflammation producing it: in which case the disease, as it respects the presence of water in a part, may visibly resemble another example, and yet be essentially different from it, by the serous inflammation which produced it in both having ceased, on its occurrence, in one of them." (P. 41, 42.)

Another evidence of the relation existing between dropsy and disease of local excitement, arises from the effects it produces on the general system,—that is to say, emaciation; and which arises from the continued secretion and absorption of the drop-sical fluid, creating effects similar to those which arise from the continued discharge of pus from a suppurating surface; and hence this exhausted or cachectical state of the system, which has so often been assigned as the cause of both local and general dropsy, is an effect only.

The remaining portion of this section we pass by, conceiving it to contain some comparisons between suppurating surfaces falling into gangrene, and the same consequence taking place in œdema, which are rather fanciful than just, and against which it would be very easy to adduce powerful objections.

This long and interesting chapter closes with a recapitulation of the pathological conclusions, together with the facts by which they are supported; but which we regret that our limits prevent us from inserting.

Having in the last chapter cleared the ground for his building, Dr. Ayre commences Chapter the II^d. by observing that the effusion of the serous fluid in dropsy is to be considered as arising from a local vascular excitement in a serous tissue, which may be either, first, subacute or chronic; secondly, symptomatic or idiopathic; or, thirdly, the serous inflammation may be either local or general. He then proceeds to the consideration of the several forms of the disease, and which are, 1. Hydrocephalus Internus; 2. Hydrothorax; 3. Ascites; 4. Ovarian Dropsy; 5. Anasarca.

The first section treats of Hydrocephalus Internus. If we pass this by without comment, it is not because we undervalue the contents; but because we have had occasion to bring the

subject before our readers, and to explain our views regarding it, in a very recent Number.* We therefore proceed to section the second, on Hydrothorax.

The symptoms of this affection, says our author, pertain only remotely to the true disease. The pressure of the water on the vital organs produces a disturbance, from which these symptoms proceed. There is no occasion for us to recapitulate these symptoms; they are well known. None of them, Dr. Ayre remarks, are truly pathognomic of the effusion, but must be taken collectively: besides which, they only prove the effusion, and not the state of previous excitement which has caused it, and which may still be continuing to operate. Hydrothorax may be either idiopathic or symptomatic, and proceed from a local or general cause; but the nature of the inflammation is the same in both. This is a disease not capable of being divided into stages; but, as is the case in hydrocephalus, there is also in hydrothorax a similar degree of serous inflammation, and our object should be to remove or prevent this state. The most usual mode by which this state is induced in serous membranes, is by the extension of chronic inflammation existing in the diseased organ extending to them, and not by mere consent of parts.

The particular diseases within the chest, tending to produce a serous effusion, are next hinted at; and we are told that, in many cases, the danger of the organic disease is inconsiderable, excepting as the cause of this consecutive complaint (effusion); whilst, in others, the dropsy is the sequel of a disease essentially fatal; and to distinguish between these states, is a desideratum in pathology. Our author here takes occasion to lament the little light that post-mortem examinations have shed upon the true relation existing between the diseases of the several viscera and the serous effusions that take place in their cavities: hence, when a disease of the heart is found, such as ossification of its valves, this is usually considered as a mechanical cause of the effusion; and, as this state cannot be remedied, it is thought no means are available for the prevention of the effusion. But, continues Dr. Ayre, the means sometimes successfully used for the removal of the water, now and then have the effect of removing the chronic excitement producing the effusion; and radical cures are occasionally and unexpectedly occurring, from treatment which is supposed to be exclusively suited to the removal of the water.

When effusion takes place in the chest as a consequence of

* See Critical Analysis of an "Essay on the Nature, &c. of Water in the Brain, by W. SHEARMAN, M.D." Number for December.

inflammation, it is often looked upon as the result of debility arising from large depletion. This opinion our author combats, first, from considering that such effusion does not take place frequently for some weeks, or even months, after the bleeding was employed; secondly, that, although the debility is general, the effusion is local, and precisely in that cavity which has been the seat of previous disease. From hence he concludes, that the real truth is that, in such cases, the bleeding has not been carried far enough, or has been used too late; or that, during convalescence, sufficient care has not been taken to avoid those causes which tend to keep up or increase the force of the local or general circulation, whence a lower grade of inflammation is left behind in the chest, which produces the subsequent evil. In such patients there will often be found, upon close examination, a permanent difficulty in breathing whilst at rest, or an obstruction to the full expansion of the chest, which circumstances are irreconcilable with the assumed debility as a cause; though our author admits that the effusion into the chest will sometimes occur without any indications of its approach.

Upon these last statements of our author, we are disposed to pause. We conceive that they cannot be admitted in their full extent, and that, without some qualification, they may lead to an unnecessary and uncalled-for activity in the use of the lancet; which is, perhaps, rather too much the error of the present day, upon every slight occasion. Such effusions as Dr. Ayre alludes to are frequently sudden, instead of requiring months to come on. Again, though the debility be general, still how can effusion be expected but in the cavity where the previous disease has existed? or how does he prove that the mischief arises from a lower grade of inflammation being left? or in what does that expression essentially differ from the disease not having, in fact, been cured at all?

But to return to the causes of hydrothorax: there is one, observes Dr. Ayre, which has a much more important influence in producing or predisposing to it, than is generally supposed;—that is, a congestive state of the circulation, brought on sometimes by indulgence in eating, and taking too little exercise. In this state, any slight cause, further disturbing the balance of the circulation, may lead to the serous effusion. Our readers will probably recollect some cases in Dr. VENABLES' late publication, which go very far in confirming the views and positions of our author.

Section third treats of Ascites.—Abstractedly from its cause, water in the abdomen, says our author, is of little importance; and in this it differs both from hydrothorax and water in the head, where the effusion forms a most important feature of the

disease: it is, therefore, to the remote causes that the attention of the practitioner should be directed. This remote cause may be either symptomatic or idiopathic, local or general. When the disease is symptomatic, some viscus is diseased: but then it is necessary that the disease should be making progress; for, if inflammation be not present, mere bulk is not capable of producing this effect. Examples of this truth are daily offered to us in the liver and spleen, as well as in the glands of the mesentery. To produce the serous discharge, it is, however, necessary that the peritoneal coat should participate in the disease, and the rapidity of the accumulation will have reference to the extent or intensity of the excitement. After tapping, it is well known that the effusion takes place more rapidly. This our author accounts for in consequence of a renewal of the inflammation by the operation.

In some instances the water may be absorbed, and the patient be cured as far as regards the dropsy, whilst the serous inflammation has only yielded to a more active grade of disease; so that coagulable lymph is poured out, the peritoneal surfaces become agglutinated, and a fresh and more formidable disease is superinduced.

When ascites is idiopathic, it may proceed from any of the common causes of inflammation. The most frequent of these is cold, which may act either locally or generally: in the latter case, there is generally anasarca, and the progress is rapid; there is fever, and thirst; the blood is cupped, and the urine loaded with serum. The subjects of this form of disease are robust men, and stout full-habited females. When the watery effusion is in large quantity, it may act as a source of further disease on the peritoneal membrane. One of the most obvious evidences of the effects of this pressure, is the entire absorption of the fat from the parietes of the abdomen. Neither do the viscera of the abdomen themselves always escape; though it must be observed that Dr. Ayre, strangely enough, illustrates this remark by a case of hydrothorax, which, though undeniably true, is not quite an instance in point; since it is obvious that the bony parietes of the chest make it impossible to compare one kind of effusion with the other.

The fourth section, on Ovarian Dropsy, we pass by altogether: it is short, and contains nothing deserving of particular comment.

The subject of Anasarca is discussed in section the fifth, and the same principles are applied to all forms of this affection. It is said by our author to consist of a serous inflammation in the cellular tissue of the body, with a serous effusion as its result. We find that this effusion, like those above mentioned, may be

either symptomatic or idiopathic, local or general, and the disease derives all its importance from its remote cause.

The idiopathic forms are first mentioned: that is, anasarca arising from cold, from scarlatina, from cold locally applied, in which the effused fluid is of a gelatinous nature, bearing some resemblance to the phlegmasia dolens, or white leg, of the puerperal state, to which Dr. Ayre believes it to be closely allied. Œdema of the feet is sometimes symptomatic of chylopoietic disease, especially in chlorotic females; but most frequently it attends upon visceral diseases, beginning in the lower extremities, but rarely attended with those strong signs of local excitement so obvious in idiopathic anasarca. Its occurrence towards the close of various chronic diseases of a fatal nature, has been referred to pressure made by the water on the iliac veins; but, says Dr. Ayre, in pregnancy, the uterine pressure produces a considerable swelling of the crural veins, without any serous effusion resulting from it. But here we beg to observe that, in this very instance, a serous effusion from pressure is an every-day occurrence. However, our author does not deny that pressure on a vein may produce an effect of this kind; but he thus accounts for it:—

“A pressure made on the brachial vein and its branches by schirrous glands in the axilla, is a common cause of this state. The remote cause is here, indeed, of a mechanical kind; but not so the proximate cause of the effusion. By the resistance given, in this case, to the blood's return by the principal veins of the limb, a reaction is occasioned in the extremities of the arteries leading into the corresponding extreme branches of the veins; and which reaction is in this, as in a multitude of other occasions of congestive fulness in these vessels, a sanative effort of nature to overcome the primary obstruction.” (P. 111.)

Dr. Ayre next contends against the commonly-received opinion of an anasarcons state of the limbs, in chronic disease, being the product of local and general debility, and which has been supported by observing that the swelling is increased by a depending, and relieved by an horizontal position; by the inflammatory state of the parts being incompatible with this state of debility; and by the want of preternatural heat on the surface of an œdematous part. His answers to these objections are in substance as follow:—First, that the effect is not correspondent with the assigned cause; since, in many cases where the debility is excessive, there is no œdema,—as, for example, in the last stage of fevers. Secondly, that effusion from position will occur in the strongest person, when unduly subjected to this cause; and lastly, with respect to this and other objections, that there is, in certain fatal chronic diseases, a tendency in the lower limbs to take on a low inflammatory action, often of the erysi-

latus kind; and that, therefore, the still lower degree of it proper to anasarca may be well imagined to prevail. With respect to the temperature of the surface, this objection, our author truly remarks, may apply to all forms of œdema; yet some are confessedly the consequence of inflammation.

Our readers may now judge whether Dr. Ayre's answers fully meet the objections he has thus fairly stated: we think they do not, and that this section especially restricts the causes of anasarca too much to his favourite explanation, which, though we believe to be generally true, does not appear to include the œdema of old men, that of the pregnant female, and some other similar conditions, which we cannot help still referring to direct debility. We may be wrong, but we are not convinced, by what the author has urged, that we are so.

This section concludes with a recapitulation of the principal positions and doctrines contained in the whole chapter.

The Mode of Treatment to be adopted in the different drop-sical complaints above mentioned, forms the subject of the third Chapter. With respect to the mode of treating Hydrocephalus we have but little to remark, excepting that the doctrines and directions are, generally speaking, highly judicious; though the practice does not materially vary from that pursued by the best-informed practitioners of the day. One passage we feel inclined to extract, because our own experience confirms that of our author upon this point; and it is likewise instructive, as it teaches the young medical man to pay attention to any hints which the history of a case may present, by the adoption of which he may occasionally be enabled to perform a cure in very doubtful and obscure cases.

“To some of my readers, perhaps, it may seem like an adoption of the doctrines of the humoral pathologist, to recommend so inconsiderable a remedy as an issue for so considerable an affection as an incipient turgescence, or impending inflammation, of the brain: but, whatever may be said, (and much may be said upon the question,) the fact of its utility in many such cases is indisputable. As an instance illustrative of this fact, among many that have repeatedly fallen under my observation, I may mention here the case of a man whom, some years ago, I admitted into the hospital for epilepsy, which he had been labouring under during a considerable time. The fits occurred three or four times a-week, and were preceded by that peculiar feeling in his right arm which is termed *aura epileptica*. By an accidental exposure of that arm at one of my visits, I discovered a scar, and, upon inquiry as to its origin, I learnt that it was caused by an extensive sore, which had been discharging during several months, and which had healed up a short time only before he was attacked by the fits. The connexion between his disease and the suspended discharge being apparent, I substituted a seton in the neck for the medicines before in use, and with

the result, I need scarcely add, of immediately curing him of his epilepsy." (P. 125, 126.)

The treatment of Hydrothorax and Ascites are detailed under the same head, because, says Dr. Ayre, they resemble each other so closely in the nature of their remote or proximate cause. For our own parts, we do not think this a good reason; for, if their causes are the same, the functions and structure of the parts render precisely the same mode of treatment inapplicable to both; and, therefore, we think this section would have been more clear if the treatment of each had been considered separately, with respect to the adoption of venesection, to the employment of mercury, and the use of purgatives. We quite agree with our author in the preference he gives, in *general*, to local rather than to general bleeding, in the diseases leading to dropsical effusion in the cavities. The following remarks upon this subject appear to us to be judicious:—

"With too many practitioners, it is the practice to employ mercury freely in every case of abdominal dropsy, under the vague notion of there existing some mechanical obstruction in the liver or other viscus, as a cause of it; and under the equally vague notion that mercury, so employed, will remove it. The practice, however, (to speak of it in the mildest terms,) is founded on erroneous views of the pathology of these diseases; and employed, therefore, as it is by some, on all the occasions in which they meet with them, must be frequently very injurious. For, independently of the injury to be inflicted by it, when given freely in some of the forms of liver-disease, there is an effect produced by it on the urine, when given to a person in health, resembling that which arises from the specific excitement of dropsy. Under a salivation, the urine becomes charged with serum. Any condition of the system, therefore, approaching even to the state of salivation, must be injurious, by the tendency it must have to increase that morbid state of the body which is nearest allied to the hydropic one. Hence the mercurial salivation has been numbered amongst the remote causes of dropsy; and the resemblance between the dropsical and mercurial excitement, thus established by the common resemblance of the urine in these states, goes far to prove this connexion; and it is not improbable that the mercurial inflammation, when considerable, may survive its specific cause, and degenerate at length into the purely hydropic state. When, however, mercury is given in minute doses, so that these its specific morbid effects are not produced, it is capable of becoming highly useful, as we shall presently have occasion to notice." (P. 148, 150.)

We have seen a case of ascites produced, as far as we could judge, by the action of mercury, excited and kept up for an immoderate period, in a complaint where certainly no visceral affection previously existed.

The only remaining peculiarity in our author's practice in these forms of dropsy, is the small doses of the squill and digitalis which he is in the habit of employing: of squill somewhat less than one grain, and of powdered digitalis only one-sixth of a grain, given uninterruptedly every three or four hours.

The treatment of Ovarian Dropsy we omit, as containing nothing that calls for observation or comment.

On the subject of Anasarca, we are told that, in treating it, we must advert to its nature and causes. In idiopathic cases, it may be treated solely with a view of getting rid of the effused fluid. Here any kind of remedies will occasionally succeed; and puncturing the œdematous parts, with bandages afterwards applied, will be useful. We have found the acupuncture needle well adapted to fulfil the above intention. Dr. Ayre is in the habit of applying leeches to œdematous swellings, in which the serous inflammation still subsists, and following their application, at the distance of twelve hours, by evaporating lotions; and he tells us that we are to distinguish the cases where this serous inflammation either exists or is making progress, by the state of the pulse and the serous quality of the urine, rather than by the extent of the swelling. In cases, therefore, where the disease is not seen early, the treatment may be frequently limited to those means which promote the absorption of the water: neither leeching nor bleeding will be required. The following directions are important:

“ When the dropsy of the skin is considerable and long protracted, and symptomatic of some visceral disease, as it most commonly is in these cases, and is attended by a serous state of the urine and a general failure of the strength, the cachectical state of the system may be considered as established; and the treatment is then beset with difficulties. For the general means, which are useful in the earlier stages of the disease, and when the vital strength is entire, become injurious in this, by the tendency they have, aided by the effects of the visceral disease, to diminish further the vigour of the system; whilst, at the same time, the treatment, which is suited to support the declining strength, can contribute nothing towards lessening the constitutional and local disease, but will frequently increase that morbidly excited state of the circulation, which, analogous to what occurs in diabetes, will continue and increase under the most decided marks of general constitutional weakness. Pending the continuance of that inflammatory state of the system in which the urine is charged with serum, the debility will be mainly derived from that drain of its nutrient parts which is thus established in the body, assisted by the weakening effects of the organic disease. If blood be drawn, it will be found, in many of these cases, to exhibit the usual signs of inflammation; and the treatment of the tonic kind, when employed to support the strength, will be often found to act unfavourably.

“ The plan to be pursued must consist in the use of such means as

shall assist the powers of digestion and assimilation, so that, by a highly nourishing but plain diet, the drain from the system may be somewhat counteracted; and, at the same time, the cause of the effusion is to be corrected by the use of local depletion and blistering, and by the temperate employment of those general means which are useful in the less aggravated forms of the disease." (P. 174—176.)

It is only necessary to add, that the diet of patients, in the symptomatic form of dropsy, should be plain; in the idiopathic form, the antiphlogistic system should be rigidly enforced; the clothing moderately warm, and such as will promote the insensible perspiration.

Some observations on the treatment of abdominal and ovarian dropsy by tapping, next present themselves to our notice. In all such cases, this operation is to be looked upon as a necessary evil, and only resorted to as a means of avoiding a greater one. The circumstances calling for this operation are the great distention caused by the effusion, producing a morbid stimulus to the peritoneum, or where so much pain and irritation are produced as to risk the inducing a similar disease of the chest: whilst the objection to it is, the chance of exciting a higher degree of inflammation. Dr. Ayre believes that, in general, tapping is resorted to too early, and under a condition of visceral disease rendering its success impossible. These objections will readily be understood, on reference to the doctrines of the pathology of the disease, which have already been enlarged upon.

"To determine correctly, therefore, regarding the danger of the operation, in respect to the inflammation that may ensue upon it, a reference must be had to the nature and extent of the hepatic or other disease, and not merely to the intensity or the extent of the serous inflammation and its hydropic effusion; both of which are but secondary.

"In illustration of the importance of referring to these distinctions, I may notice the case of a female patient, of about thirty-five years of age, whom I admitted some years ago into the hospital, labouring under an ascites and general anasarca, to a degree that I never saw exceeded. The disease was of some months' standing, and all the usual means had failed with the practitioner whose care she had been under, and who had been only deterred from tapping by the fear of its danger, as her disease was suspected to have originated from intemperance. There were, however, no decided symptoms of hepatic disease, nor any signs of effusion into the chest; and the disease, although formidable in its appearances, and in the disturbance it gave to the breathing, was not so in reality; and the water, therefore, as a measure of necessity, was drawn off by tapping. In three weeks the anasarcaous water was absorbed, and there was no return of the ascites. She left the hospital well; and I heard, several years after, that she had since that time continued altogether free from her disease." (P. 182, 183.)

Our author premises a drastic purgative the day before tapping is to be performed. Six hours after, a few leeches are to be applied to the abdomen, and a small blister on each side of it: these are repeated again as early as the condition of the skin will allow. At the same time, the other remedies previously in use must be continued.

The remaining portion of the volume (about fifty pages) consists of cases and dissections of all forms of dropsy,—not occurring, however, in the practice of the author, but selected, with a view to the illustration of the doctrines inculcated in the work, from the writings of eminent practitioners, both English and foreign. It is obvious that this portion of our author's work is not susceptible of analysis; nor can we afford room to extract any cases, since to abridge them would be to rob them of their value. We can do no more than refer the reader for these particulars to the work itself.

In concluding this analysis, we beg to repeat that we have derived considerable information from the perusal of Dr. Ayre's *Researches in Dropsy*; although we have ventured occasionally to doubt the accuracy of some of his conclusions; and have thrown out here and there a hint, which he may, perhaps, be inclined to adopt when a second edition of the book is called for. There are some points of doctrine which, we think, he may reconsider with advantage, and many that he may enter into at greater length; but the ground-work of his performance is excellent, and, as we said before, his work cannot fail to have a beneficial effect on practice in this class of diseases.

ART. II.—*An Essay on the Application of the Lunar Caustic, in the Cure of certain Wounds and Ulcers.* By JOHN HIGGINBOTTOM, Nottingham, Member of the Royal College of Surgeons of London. —Svo. pp. x. 147. London: Longman and Co. 1826.

THERE is certainly nothing very ambitious in the title of this little Essay, which treats of a common substance as an application to injuries as common. We are not, however, among the number of those who measure the importance of medical writings by their pretensions, or estimate the weight of the argument by the weight of the volume. We have before asserted, and we now repeat, that the zeal for surgery too often ends in a passion for what is new and striking; while the more really important cases, of every-day occurrence, are passed by unheeded, and many a student, who could tie a great vessel with dexterity, would be puzzled to heal an old ulcer. The work before us, however, presents an instance of a surgeon who prefers healing

the "old ulcer," and who does not despise the task of mitigating the "little evils of human life."

Mr. HIGGINBOTTOM has been in the habit of treating various common, but painful and often troublesome, surgical injuries, by means of the lunar caustic locally applied, and has brought his observations together in the shape of an Essay, which contains satisfactory proofs of the efficacy of the practice. The nitrate of silver is known to every surgeon as an application of great utility in allaying the irritability of various forms of ulceration, independently of its action as a powerful escharotic. These properties have rendered it available, in the hands of our author, for various useful purposes; but particularly for healing wounds and ulcers by forming an adherent eschar.

"It appears scarcely necessary to describe the immediate and well-known effects of the application of the lunar caustic to the surface of a wound or ulcer. It may, however, be shortly observed, that the contact of the caustic induces, at first, a white film or eschar, which, when exposed to the air, assumes in a few hours a darker colour, and at a later period becomes black. As the eschar undergoes these changes of colour, it gradually becomes harder, and resembles a bit of sticking plaster. In the course of a few days, according to the size and state of the wound, the eschar becomes corrugated, and begins to separate at its edges, and at length peels off altogether, leaving the surface of the sore underneath, in a healed state.

"In the formation of this eschar, several things require particular attention. The application of the caustic should be made over the whole surface of the sore; and, indeed, no part requires so much attention as the edges. To make a firmer eschar, the caustic should even be applied beyond the edge of the wound, upon the surrounding skin; for the eschar, in drying, is apt to contract a little, and in this manner may leave a space between its edges and that of the adjacent healthy skin.

"At the same time, much attention must be paid to the degree in which the caustic is applied. In cases of recent wounds unattended by inflammation, it may be applied freely; but, when inflammation has come on, too severe an application of the caustic induces vesication of the surrounding skin, and the edges of the eschar may in this manner also be loosened and removed. If every part is touched, a slight application of the caustic is generally sufficient.

"The importance of avoiding all causes which might detach the edges of the eschar, will be apprehended by the following interesting observation, which I have been enabled to deduce from very extensive trials of the caustic: it is that, in every instance in which the eschar remains adherent from the first application, the wound or ulcer over which it is formed invariably heals.

"Not only the cause just mentioned, but every other by which the eschar might be disturbed, must therefore be carefully avoided; and especially, as the eschar begins to separate from the healed edges of the sore, it should be carefully removed by a pair of scissors.

"To the surface of the wound the eschar supplies a complete protection and defence, and allows the healing process to go on underneath uninterruptedly and undisturbed. It renders all applications, such as plasters, totally unnecessary, as well as the repeated dressings to which recourse is usually had in such cases; and it at once removes the soreness necessarily attendant on an ulcerated surface being exposed to the open air. In many cases, too, in which the patients are usually rendered incapable of following their wonted avocations, this mode of treatment saves them from an inconvenience, which is to some of no trifling nature." (P. 3—8.)

As it becomes an important object to prevent the eschar from separating, it may be further secured by applying a portion of goldbeater's skin.

Another application of the caustic is to cases in which much and long-continued pain is to be apprehended from the ordinary methods of cure, as in superficial wounds along the skin and similar situations; in which we are told that "the inflammation which would then have been set up, is entirely prevented by the due formation of the eschar." If, however, there be already considerable inflammation round the injury, the caustic is to be avoided, as tending to increase it.

In recent injuries, and in ulcers nearly on a level with the skin, the eschar is generally adherent; and this, of course, is regarded as the most favourable occurrence: but, under other circumstances, pus or a scab forms under the eschar. When fluid is present, (which may be detected by the centre becoming raised, and yielding to the pressure of a probe,) a slight puncture is to be made, the pus evacuated, and the caustic again applied to the orifice thus made. This little operation is to be repeated as often as fluid is found. At length the eschar becomes adherent, and in due time peels off. Where, however, the eschar does not separate favourably, the existence of a scab underneath is to be suspected; under which circumstances, the whole must be removed by the application of cold poultices for two or three days. By this means the eschar is removed, while the inflammation is allayed. The caustic is then to be applied once more, and protected by the goldbeater's skin.

The degree of pain resulting from this method of treatment, is less than would be expected *a priori*. In small wounds, indeed, it is inconsiderable, and of short duration; in recent injuries it is more acute than in ulcers; but, in every case, it is represented as quickly subsiding, and giving place to more effectual relief than the patient would experience under any other method of treatment. Although, therefore, the mere pain does not constitute any very formidable obstacle to its employment, yet there are other circumstances pointed out by the author, as rendering it improper or inefficient,—such as ulcers too

extensive to admit of the formation of a complete eschar; or in such a situation as to prevent the possibility of this remaining undisturbed, (as between the toes;) the presence of much inflammation, or œdema. The lunar caustic has appeared to the author more efficacious than any other, and he gives a preference to that which has been made for some time before it is used.

In many cases it is obviously impossible to treat wounds by means of an eschar, either adherent or unadherent; yet even here Mr. Higginbottom frequently has recourse to the nitrate of silver as a local remedy, applying over it a cold poultice, "made without lard or oil." The application of the caustic is to be repeated every second or third day, till at length, the inflammation having subsided, an attempt may be made to form an adherent eschar.

Having explained, in a general manner, the modifications to be adopted in the application of the remedy, we now come to more particular illustrations:—

"In cases of recent punctured wounds, the orifice and surrounding skin should be moistened with a drop of water; the caustic should then be applied within the puncture until a little pain be felt, and then over the surrounding skin, and the eschar must be allowed to dry. In this manner it is astonishing how completely the terrible effects of a punctured wound are prevented: the eschar usually remains adherent, and the case requires no further attention.

"At a later period after the accident, when the caustic has been neglected, some degree of inflammation is usually present, the orifice is nearly closed with the swelling, and a little pus or fluid is formed within. A slight pressure will evacuate this fluid: the caustic may then be applied within the puncture, and over the surrounding skin beyond the inflammation, and must be allowed to dry. In this manner we frequently succeed in forming an adherent eschar, and all inflammation subsides. Any slight vesication which may be raised around punctured wounds, is not of the same consequence as when an adherent eschar is wished to be formed over a sore or ulcer. One or more small punctures may be made to evacuate the fluid, and the part may be allowed to dry.

"If there is reason to think that an abscess has actually formed under the puncture to any extent, it must be opened freely by a lancet, and treated with caustic and poultice, keeping the poultice moist and cold with water.

"In cases of puncture, where the orifice is healed, and where an erysipelatous inflammation is spreading, attended with swelling, I have applied the caustic freely over and beyond the inflamed parts; and I have had the satisfaction to find that the inflammation has been arrested in its progress, and has shortly subsided.

"This mode of treatment is particularly useful in cases of punctured and lacerated wounds from various instruments, such as needles, nails,

hooks, bayonets, saws, &c.; and in the bites of animals, leech-bites, stings of insects, &c. In considerable lacerations, the same objection would exist to this treatment as in large ulcers.

"The dreadful effects of punctures from needles, scratches from bone, or other injuries received in dissection, are totally prevented by this treatment. I have, for the last five years, had frequent opportunities of trying it in these cases, and have the most perfect confidence in its success.

"The advantage of these modes of treating punctured wounds will, however, be best explained and established by a selection of cases, to which I can add particular remarks, as they may be suggested by peculiarities in the cases themselves.

"CASE I.—A. B. received a severe punctured wound by a hook of the size of a crow-quill, which pierced into the flesh between the thumb and fore-finger on the outside of the hand: scarcely a drop of blood followed, but there was immediately severe pain and tumefaction. The lunar caustic was applied, without loss of time, deep within the orifice, and around the edge of the wound; and the eschar was left to dry. The smarting pain induced by the caustic was severe for a time, but gradually subsided.

"On the ensuing day, the eschar was adherent, and there was little pain; but there was more swelling than usual after the prompt application of the caustic, owing to the mobility of the part.

"On the third day, the swelling remained as before, and there was a little sense of heat. On the fourth day, the swelling and heat had subsided, and the eschar remained adherent. On the succeeding day, the eschar had been removed by washing the hand, and the puncture was unhealed, but free from pain and irritation. The caustic was re-applied.

"From this time the eschar remained adherent, and at length gradually separated, leaving the part perfectly well.

"It is quite certain that, under any other mode of treatment, this severe puncture would have greatly inflamed, and have proved very painful and troublesome; and it is not improbable but that suppuration and much suffering might have ensued. All this is effectually and almost certainly prevented, if the caustic be applied promptly, as in this case. When time has been lost, the case is very different, as will appear hereafter; but, even in these cases, the caustic proves an invaluable application." (P. 24—31.)

The author entertains an equally favourable opinion with regard to the application of the caustic in wounds received during dissection: he states that, at two successive periods, he was brought into great danger from inoculation during the examination of dead bodies; but that, since the last of these occurrences, (in 1819,) he has completely removed this inconvenience by the prompt and free application of the caustic.

In recent punctures, he employs it as described in speaking of simple punctured wounds; but he states that, when the case has been neglected, a small tumor is usually formed under the

skin: this is to be removed, and the caustic to be applied both to the surface of the wound and over the surrounding skin. When the case has advanced still further, and the absorbents have become inflamed, a crucial incision is to be made, the caustic very freely applied, and afterwards a cold poultice and lotion; "the usual constitutional remedies being actively enforced."

An analogous method of treatment is recommended in bruises. We give a case in illustration.

"Mr. Granger, aged thirty-six, was exposed to a severe bruise by a great weight of stones, which had been piled up, falling upon the outside of his leg: he was extricated from this situation with much difficulty. Besides the bruise, the skin was removed from the outside of the leg to the extent of ten or twelve inches in length, and in some parts an inch and half in breadth; and, in the fore part of the ankle, a deep furrow was made by the rough edge of one of the stones. I applied the caustic, in about half an hour after the accident, over the whole surface of the wounds, and protected the eschar by the gold-beater's skin. The patient was directed to keep the leg cool and exposed to the air. He took no medicine.

"On the succeeding day, the leg was a little swelled; but the patient did not complain of any acute pain, but only of a sense of stiffness. An adherent and perfect eschar was found to be formed over the whole extent of the wound. There was no fever.

"On the third day, the swelling had abated. No further remedy. The patient was still enjoined to rest.

"On the fourth day, the swelling was nearly gone. The eschar remained adherent. The patient walks about.

"From this time the patient pursued his avocation of a stone-mason: no further remedy was required; no inconvenience experienced; and the eschar separated in about a month.

"I think it totally impossible to have cured this wound, by any other remedy, in less than a month; during which period the patient must have suffered much pain and fever, and have been quite confined.

"It is also quite certain, I think, that there would have been an extensive slough, from the severity of the bruise. This was doubtless prevented by the application of the caustic." (P. 70—73.)

When ulcers are treated in this way, care must be taken that the surface be not too extensive; that it be not exposed to friction or motion; and that it be not attended with profuse discharge. From this it might be anticipated that the remedy would not be successful in extensive ulcers of the legs; but, in small irritable sores, particularly about the ankles, "the caustic is invaluable." Under such circumstances, the cold poultice and lotion should previously be used for a few days, to remove irritability and inflammation. Numerous cases are given in illustration.

Several "anomalous" cases are next detailed, in which this

method of treatment was adopted with advantage: among them we find Whittlow, Inflammation of the Finger, Inflammation of the Knee, and Tinea Capitis. Of these, the only part we shall extract is that relating to inflammatory affections of the knee.

"Servant women (I suspect from much kneeling in scouring stairs, &c.) are subject to a species of inflammation of the knee, which is frequently extremely troublesome.

"In one case, suppuration of the integuments took place in the fore part of the knee, and the patient was obliged to leave her situation, and go to her friends at a distance, although every antiphlogistic means was tried for her relief.

"In two other cases, after the application of twenty leeches, and the administration of an emetic and purgative medicine, I applied the lunar caustic freely over the whole surface of the knee, previously moistened with water. In a few hours the cuticle was raised and vesicated. I evacuated a viscid puriform fluid, and I directed the constant application of the cold poultice and lotion.

"In a few days all inflammation subsided, and the patients remained well.

"These three cases having occurred to me at the same time, and being apparently equally severe, I was enabled to judge of the efficacy of this use of the caustic; and I can strongly recommend it to a future and further trial. Its application causes more pain than a blister, but not so much as to form an obstacle to its employment.

"It may not be unimportant here to suggest the trial of the caustic in other cases of inflammation, in which a more than usually active local remedy is required." (P. 126—128.)

It is but justice to the author to state, that his recommendation of the lunar caustic, although certainly more general than that of most practical writers, is by no means universal, and certain cases are enumerated as being decidedly injured by such treatment.

"The caustic is inapplicable in extensive lacerations, for the same reason that it is so in extensive ulcers.

"I have found the caustic of little use in incised wounds, and should not employ it except in such wounds received in dissection.

"I have failed in my attempts to heal scrofulous sores by the adherent eschar: I would propose the trial with the lunar caustic and poultice.

"In erysipelatous inflammation, where vesicles are formed, the caustic does injury, as in recent burns.

"I have always found that the caustic has done injury in boils, aggravating rather than diminishing the affection.

"*Of Burns.*—The application of the lunar caustic in recent burns or scalds, has always appeared to me to increase the inflammation and vesication, even inducing blisters where there were none before. The caustic must not, therefore, be applied in these cases, until the inflammation has entirely subsided; but, when there remains only a small

superficial ulceration, the caustic may be passed lightly over the ulcerated surface, to form an eschar, which is to be defended by the gold-beater's skin; for the affection is then reduced to the state of a common superficial ulcer. An adherent eschar is generally readily formed, and no further application is required. If the ulceration be more extensive and deeper, the lunar caustic may be applied, and the eschar treated exactly as in common ulcers." (P. 132—134.)

DIVISION II.

FOREIGN.

ART. III.—*A Treatise on the Physical and Medical Treatment of Children.* By WILLIAM P. DEWEES, M.D. Member of the American Philosophical Society of Philadelphia, and of the Philadelphia Medical Society; Lecturer on Midwifery, &c.—8vo. pp. 496. Philadelphia, 1825.

THIS work is about to be printed in this country; but, as we have been favoured with a copy of it from the author, we are enabled to give our readers a brief notice of its contents, without waiting for that event. If we devote less space to the consideration of it than we did to the "Practice of Midwifery," by the same author, it must be remembered that we consider it calculated only to fill up a blank in American literature, of which we have not to complain.

Upon casting our eye over the table of contents, we involuntarily started at the first words, "Chap. I, of Marriage," and turned back to the title-page, to be assured that the subject of discussion was the moral and medical management of children. We found, however, our first perusal had been correct, and were half inclined to accuse our author of going a little too far back, like Tristram Shandy, who begins his history with his own begetting. We begin, indeed, not merely *ab ovo*, but settle the most remote preliminaries, by comfortably marrying the mother of our future subject in a respectable manner; for the first chapter is occupied in considering the "period of life" at which women may, with every chance of producing healthy offspring, take unto themselves a husband; and in some other observations relating to the subject of marriage, which we confess to be very true, although, perhaps, they may, by some, be thought a little unnecessary and misplaced.

It would appear, from the Preface, that the physical treatment of children is a subject which has not met with that attention in America which its importance demands. The author, therefore, before he enters upon the consideration of the diseases incidental to early life, treats much at length, and with his usual ability, upon every subject relating to this highly interesting duty. The best authorities upon the subject have been consulted, and the experience of Dr. Dewees, which has been very considerable, has of course been added. We have stated our reasons for not dwelling upon many questions which are discussed.

in this volume. In this country we have numerous works which treat of the "conduct of the mother during pregnancy,"—"the influence of the imagination,"—"on the food proper for pregnant women," &c. &c. although it has not been thought necessary to include these subjects in Treatises upon the Management of Children. Dr. Dewees will, we are sure, take these remarks in good part. Sincerity is our creed, and whether "Tros Tyrius ve," Englishman or American, we state our opinions freely, but we trust fairly.

The volume is divided into two books: the first treats of the Physical Treatment of Children, and the second of their Diseases. In the first book, we believe, no subject is left unconsidered, the knowledge of which is necessary either to the mother of a family, or to a medical practitioner engaged in the management of children; and in America, where it appears so serious a blank was yet to be filled, it will doubtless be read with considerable interest, and much instruction. We would recommend it also to those in this country, who are novices in the various subjects relating to the general management of infants.

Our readers will form some idea of the objects of the second book, by an observation contained in the preface to it:—"As the improvement of any individual in the treatment of one or more of the complaints of childhood, would scarcely justify the writing of a volume to announce them, they are, for the most part, diffused through the Journals of the day: it follows it must become the office of some one to collect and embody them, that they may not be lost, and, by their loss, society sustain an injury. This office we have undertaken."

That Dr. Dewees is particularly well qualified for the task he has imposed upon himself, is well known. He has numbered five-and-thirty years in the active prosecution of his profession, and the diseases of children have claimed a large share of his attention. It is the fashion to look upon the labours of the compiler as of very easy execution, and as undeserving any considerable portion of praise. He is assuredly, however, a much more useful auxiliary in the cause of science, particularly when age and experience have well stored his "mental magazine," than nine-tenths of those who riot in the reveries of hypothesis, and "spin the thread of fancy," to the confusion of themselves and others. We shall not travel over the consideration of the treatment considered necessary by Dr. Dewees in every disease of children, but shall assume the privilege of selecting only here and there a portion of any part which appears to merit particular distinction.

In the *Jaundice* of new-born children, we are recommended, by most authorities in this country, to give an emetic. Dr. Dewees, with the deference which real ability is always prepared to offer to the opinion of others, advises a contrary plan. "We have (he says,) given a fair trial to the remedy, and the result is decidedly against the practice. Emetics have not only failed to relieve the disease, but have rendered the stomach so irritable as not to receive any other remedy willingly." Dr. Dewees recommends the following plan of treatment:

"When we find symptoms of jaundice,—that is, yellow skin, eyes, and urine, we begin by giving small doses of castor-oil,—that is, a small tea-spoonful every two hours, until it purge freely. If, upon the

inspection of the evacuations, we do not find bile in them, we follow up the purging, the next day, by giving calomel in very small doses, until a cathartic effect is produced. This may, and does require sometimes, two or three days' perseverance in the calomel, aided by small doses of soda, supersated by carbonic acid gas, before the bowels are moved; for it must be recollected they are most commonly very torpid. We have said we give calomel in very small doses; the following is our formula:—

R. Calom. ppt. gr. iij.
Sacch. alb. gr. vj. M. bene, div. in xij.

“One of these to be given every two hours until they operate. They are best exhibited in a small drop of thin molasses, washed down by the solution of soda, in the proportion of two scruples to eight ounces of the carbonated water.” (P. 274.)

Erysipelas in children is occasionally more speedily destructive than in adults, and much discrepancy of opinion exists as to the treatment. The following observations will be new to many of our readers, in answer to the plans proposed by some English writers:—

“We shall say a few words upon each of these plans, before we detail the one usually pursued by ourselves, and other practitioners in this city. 1. As the system evidently labours under high arterial action in the commencement of almost every case of *erysipelas*, which decidedly requires medical treatment, the bark must not be thought of, either in the first or second stages of this disease. In either of the two last, it may often be proper, if the suppuration or sloughing be extensive. 2. As regards the topical applications recommended by these gentlemen, the cold saturnine have always appeared to us, if not of hurtful tendency, at least of doubtful efficacy. In the early or first stage of *erysipelas*, the camphorated spirit we have thought occasionally useful, but never efficacious. 3. The propriety of using ammonia in such immense doses, to a child perhaps within a month old, is extremely doubtful, even if it were possible to give it, (which, by the by, in our opinion, is extremely problematical;) but its usefulness in any quantity may be properly doubted, especially as the disease, in its commencement at least, according to Mr. Burns himself, is attended with fever. Of the good effects of calomel purges, we entertain no doubt; but must say, purging with it, or any other cathartic medicine, seems to be much at variance with bark and volatile alkali.

“It is probable that *erysipelas* may have a number of counter-agents; but there are very few, we believe, yet ascertained. In the time of Ambrose Paré, blisters were employed to interrupt the progress of this inflammation, both as regards the extent of surface over which it might be disposed to travel, as well as the terminations of two of its stages in either suppuration or gangrene. This remedy, however, was either forgotten or laid aside for nearly two centuries, because the *modus operandi* of the application could not be explained. To Dr. Physick do we owe its revival, the importance of which can only be appreciated by those who have witnessed the almost wonder-working operation of this remedy. We have frequently succeeded with it, both

in the adult and in the child, and can most safely recommend its application, when the inflammation attacks such parts as can readily be covered with a blister.

“The plaster should be of such a size as will rest with certainty upon the sound skin: if this precaution be not taken, its application will avail but little. When the sound skin is well vesicated, the plaster is to be removed, and the part to be treated as if a blister had been used for any other purpose.” (P. 278, 279.)

In a former Number of our Journal, we have stated the practice of the American physicians, of applying strong mercurial ointment to the part affected with erysipelatous inflammation. Dr. Dewees particularly recommends this remedy. He covers the inflamed as well as the sound skin with a coat of it; and, when it is removed or becomes dry, it is renewed by a fresh application. As this ointment, however, is used differently in the several stages of the inflammation, a description of the proposed, and indeed practised, method may be useful to English readers who are not generally acquainted with it.

“1. Where the part is inflamed, but not yet vesicated. When we see the inflammation in this stage, we cause the whole of the reddened part, as well as a portion of the sound skin, to be covered with the ointment; which is to be renewed, when the part is deprived of any portion of it.

“2. Where the part is vesicated, but the vesicles not opened. In this case, we cause the vesicles to be carefully opened, and the ointment applied as just directed for the first condition.

“3. Where the vesicles have opened spontaneously, and the part has become encrusted; but the inflammation is spread to either a considerable or limited extent. In this case, we direct the ointment to be applied only to the surrounding inflamed margin, and on a portion of the sound skin.

“4. Where portions have proceeded to suppurate, yet a part of the surrounding skin is inflamed. Under such circumstances, we open the collections of matter as early as possible, and apply the ointment to the margin, as above directed.

“Such is the efficacy of the mercurial application, that it almost immediately arrests the further progress of the disease; therefore, when practicable, it should be had recourse to early.

“We know but one objection to this powerful counter-agent,—the patient sometimes becomes salivated. This, however, seldom or never happens with young children, who are most obnoxious to the disease for which it is prescribed. In adults, on this account, we sometimes prefer the blister.” (P. 280.)

The American physicians, Drs. Little and Dean, each claim the merit of this discovery. Their claims appear so nearly equal, that it is somewhat doubtful to which the honour is to be yielded.

We observe nothing peculiar in the internal treatment which is recommended.

Judging from our own observation, erysipelas in new-born children is rarely so severe a disease as it is considered to be by Dr. Dewees.

We do not, however, agree with CAPURON* that "la nature seule" may be safely relied upon. We have seen much local irritation and general disturbance in a few cases.

Of the Suppression of Urine.—The following case is worthy of attention:—

"Mrs. — was delivered of a healthy baby, on the 15th of June, 1822. On the 20th, in the evening, the child showed uneasiness; and, on the 21st, it cried violently, and continued to be much pained until the 25th. A variety of simple remedies were used for the relief of the urine, which had been either very sparingly passed or entirely suppressed, most probably from the 20th; but without success. On the morning of the 25th, at ten o'clock, we found the abdomen very much distended, even to the scrobiculus cordis; the skin was shining, and the superficial veins were very much enlarged. The child had several very sparing stools, of a dark green colour. Two tea-spoonsful of castor-oil were given in the course of the morning. At half-past one o'clock P.M. Dr. Parrish introduced a small flexible catheter, and drew off at one time eighteen ounces and a half of a straw or cider coloured urine. At seven o'clock of the same day, the child appeared perfectly relieved; it slept soundly, and took nourishment freely. Two more tea-spoonsful of castor-oil had been given since the visit at noon, but without moving the bowels; nor did any water pass. As the child was easy, it was permitted to rest without disturbance.

"From this time the water was regularly drawn off by the catheter until the child's death, which happened on the 28th. It had gradually declined from the time of our first visit, and its mouth had become very sore. Permission was not obtained to examine it." (P. 282, 283.)

In our review of Dr. Dewees' "Midwifery," we have stated our opinion of the difficulty that must be experienced in introducing a catheter into the bladder of a child of so tender an age,—particularly of the male sex. In the above case the sex is not mentioned. It would appear, however, from the observations of the author, that the operation of passing the catheter, even a few days after birth, is easy of execution.

In several instances we have known infants pass but very small quantities of water. The use of the warm bath, however, has caused a free flow. The necessity for more certain assistance might be required, and it could only be procured by the use of the catheter.

Dr. Dewees is not of opinion that the *aphthous efflorescence* to which children are frequently liable, passes through the whole course of the intestines,—from the mouth to the anus. The occasional appearance of aphthæ at the latter part, he accounts for from the irritating nature of the stools which pass over it. His opinion is verified by one case which terminated fatally, and in which no trace of aphthæ could be discovered in the stomach or intestines. Dr. GOOD is of a different opinion,† but names no authority in confirmation of his views.

* *Maladies des Enfants*, p. 191. Paris, 1813.

† *Study of Medicine*, vol. ii. p. 391.

In the *Colic* of infants, the author considers "a tea-spoonful of warm sweet-oil a remedy of great value." The good effects of castor-oil in such cases need not be particularly pointed out.

The *purulent Ophthalmia* of new-born children is frequently a disease of considerable severity, and long continuance. In many cases it arises from the imprudence of the nurse, by the careless application of soap or spirits to the eye, in washing the infant. Dr. Dewees is of opinion, however, that this formidable complaint always arises in the infant from some "foreign matter it acquires *in transitu*, such as gonorrhœa or leucorrhœa." From this statement we differ, and can only admit the cause he assigns to be an occasional source of the disease. The mucilage of sassafras is employed by Dr. Dewees as an application to the eyes. We are unacquainted with the preparation, but presume it is nothing more than a watery infusion of the wood. The plan of cure proposed by Dr. Underwood does not escape the censure of our author; and, indeed, it must be confessed that the same objection would apply, with equal propriety, to many other parts of his work on the Diseases of Children. We have reason to hope that it is about to appear, with many alterations and improvements from the hands of a very able practitioner of this metropolis. We must, however, in our turn, object to the treatment proposed by Dr. Dewees in this disease; but we do so with respect for his ability, and deference to his long experience. The use of astringent solutions is deprecated by Dr. Dewees, "until after considerable abatement of the inflammation," or "after the disease is so much weakened as to permit the child to open its eyes in a dark room, when we may safely begin to use some mild weak collyrium with advantage." A weak solution of the acetate of zinc is preferred. At the commencement of the disease, leeches and blisters may be required, and purgatives must be given. We grant the propriety of the last-named remedies; but, from the observations we have made upon very many cases of this disease, we are firmly convinced that the profuse discharge from the eye is most effectually arrested, and the safety of the organ itself (which is frequently for weeks covered with matter,) best protected, by the early use of astringent lotions. In every case we have witnessed, where warm poultices and fomentations had been applied, the discharge was considerably increased, and no progress made towards recovery until remedies of the class we mention were used. It is true, we admit, that we may have come to these conclusions from the short and acute inflammatory stage of the complaint having passed by before our assistance was required. But the same circumstance, we presume, must have occurred in the practice of Dr. Dewees.

The remedy we prefer ourselves is that recommended by Mr. WARE, the "aqua camphorata" of BATES's Dispensatory. We do not venture to begin with this styptic application in a greater quantity than half a drachm to one ounce of water. Mr. Ware at once employed it of double the strength we mention.

Ulceration of the Mouth is a frequent and obstinate, although perhaps never a fatal, affection of children. Dr. Dewees recommends the following application:—

“ R. Sulph. Cupri, gr. x.
 Pulv. C. Peruv. opt. ʒij.
 — G. Arab. ʒj.
 Mel. Commun. ʒij.
 Aq. font. ʒiij. M. et f. sol.

The ulcerations are to be touched with this mixture and solution twice a-day, with the point of a camel's-hair pencil. This has always speedily put a stop to the disease.” (P. 301.)

When children are cutting their teeth, there is often another ulceration of the mouth. “ In this complaint the gums become swoln, very dark coloured, and spongy; they bleed from the slightest force; the child drivels constantly; the breath is extremely offensive, and there is always more or less difficulty in swallowing. The teeth that are cut at the time soon decay, and those which were through before the ulceration commenced become injured. We have rarely found any other treatment necessary than cutting the gums, and having the mouth frequently washed with a pretty strong decoction of bark.” (*ib.*)

In one family, we have lately seen four instances of this disease, of very unusual severity. Three of them occurred during the second dentition, and were attended with very considerable constitutional disturbance. We applied solutions of alum to the part, and thought the sulphate of quinine necessary as an internal remedy. This form of complaint has been denominated by Dr. UNDERWOOD *aphtha gangrenosa*. Dr. Dewees objects to the term, and properly observes, that it bears no analogy to aphthæ. It is not unfrequently protracted to a very great length of time. Months may elapse before it is remedied, under every advantage of skilful treatment.

We do not find it necessary to abstract any part of the chapter on *Dentition*. The mischiefs frequently arising from this process are clearly and accurately described, and also the best mode of relieving them. One observation, however, which the author makes is interesting, inasmuch as it affords an additional proof of the diversity between the diseases of different parts of the globe. “ We *once* saw a case where violent croupy symptoms would appear whenever a tooth was about to be cut; and these would cease when the gums were scarified, or the tooth would come through.” In this country, we are certain that any practitioner, with the extensive opportunities of the author of the book under consideration, would never pass a day without witnessing the occurrence of that which it appears he has but once met with. Our readers will be aware that this subject has recently occupied much attention. We have lately inserted some papers relating to it.

Cholera Infantum is a disease almost peculiar to the United States. The affections of the alimentary canal, to which children are so obnoxious in other situations, differ materially from the American endemic. It is described at considerable length, and would not be interesting to English practitioners.

Upon the subject of *Whooping-Cough* we have yet much to learn. No disease continues, in many cases, a more obstinate course, even under the best known mode of treatment. There are many opinions also

generally entertained respecting it, which are doubtful, if not positively inaccurate. It is not our duty, however, to attempt an essay upon the subject in the present place.

Dr. Dewees observes, that the disease "is sometimes early attended by the peculiar inspiration which gives it its common name. At other times, a considerable period elapses before this takes place; and, *in some cases, it does not at all happen.*" We give the latter part of the quotation in italics, because we consider it of much importance. To many practitioners the fact is doubtless known; but the majority of physicians certainly deem the occurrence of the peculiar noise in breathing necessary to constitute the disease. But such is not the case. For example, in one family where there are several children, and one or two labouring under hooping-cough, we shall frequently find, after an uncertain period, some of the others who have been exposed to the contagion affected with a disease resembling common catarrh, which in the course of some days attacks by paroxysms: no "hooping," however, takes place. We believe such children are not in future liable to hooping-cough. CULLEN tells us, he has had instances of a disease, "which, though evidently arising from the chin-cough contagion, never put on any other form than that of common catarrh."

Although it might be inferred, from the history of the disease as it is commonly drawn, that the diagnosis can never be difficult, it is frequently impossible to determine, at the commencement of the attack, whether we have hooping-cough or merely some slight catarrhal affection to contend with; and it happens, unfortunately for practitioners, that the public always expect an immediate decision, and sometimes, perhaps, attribute our hesitation in declaring the nature of the disease to our ignorance. A positive decision, however, cannot be given "until the permanency and obstinacy of the affection declare it to be hooping-cough." Dr. Dewees observes, that "this disease is generally more severe with infants, as they cannot expectorate with the same freedom as older children." Upon this point, our experience coincides with that of Dr. WATTS, who observes, in his Essay, that "a healthy child at the breast suffers as little from the disease as at any other age."

A medicine called Coxe's Hive-syrup is highly spoken of by the author. After purging with calomel, and bleeding (if required), it is always prescribed; and, judging from the effects of seneca in the adult, we should think it likely to be serviceable when the symptoms of inflammation had abated. To promote expectoration, it is given, to a child of three or four months old, in the dose of eight drops every hour

two. To produce vomiting, the same quantity may be exhibited every fifteen minutes until the operation is produced. We are particularly instructed, however, that the effect arising from a given dose is uncertain, and that we are consequently to be guided rather by the effects produced, than the quantity administered. The following is the recipe:—

"Take of seneca snake-root bruised, squills dried and bruised, each half a pound; water, eight pounds. Boil together over a slow fire, till the water is half consumed; strain off the liquor, and then add of strained honey four pints. Boil the honey and the strained liquor to

six pounds, or to the consistence of a syrup; and, to every pound of the syrup, add sixteen grains of tartar emetic; that is, one grain to every ounce." (P. 413.)

Inflammation and congestion of the lungs are frequent concomitants of whooping-cough; "for the relief of which, blisters are found decidedly advantageous after proper evacuations; or, should it be necessary to draw more blood, let it be done by leeches or cups, from between the shoulders. We are decidedly of opinion that blood cannot be taken by leeches or cups, with any thing like the same advantage, from any other part, where there is a threatened congestion of the lungs; and it sometimes becomes important to follow this up by a blister to the same part." (P. 414.)

It has been urged by SYDENHAM, and some other but minor authorities, that whooping-cough will pass through a determined course, and that we can only relieve the pressure of the immediate symptoms. Dr. Dewees, on the contrary, is of opinion "that its duration may as certainly be shortened as the march of fever;" and he has been entirely confirmed in this opinion by the success he once witnessed "from the exhibition of the tincture of the artificial musk, in a family of five children, who were all labouring under confirmed whooping-cough." When this remedy was prescribed, the disease had existed two weeks; "all inflammatory action was completely subdued; and the children were put upon the use of the artificial musk at the same time. One of the youngest ceased to cough in less than a week, and neither of the others continued as much as a fortnight."

In these cases, the catarrhal symptoms were mild, and it was summer. The truth would appear to lie between these opposing statements. To determine with Sydenham, that whooping-cough must run an unabated course, as a matter of necessity, is to yield too little credit to many remedies we possess. But, to assume that we can, with even tolerable certainty, arrest its progress in the majority of cases, would be contrary to our own experience. The inflammatory symptoms, with which, perhaps, the disease invariably commences in a greater or lesser degree, are certainly under our control; but the habitual and distressing paroxysms of whooping and coughing very frequently run on for a considerable period, unchecked by any remedy we apply.

We may mention, also, a fact we have frequently observed, which is not, perhaps, generally known. It is not uncommon for patients who have been affected with this disease, but who have at length entirely recovered, to remain without the slightest cough for an uncertain period, perhaps several months. The cough then returns with its characteristic whooping, and with all its former severity; and, perhaps, again lasts for many weeks. We believe this circumstance is more common in adults. In one case, in our own family, in which we were particularly interested, a lady suffered very severe relapses of the whooping-cough every winter for several years. The application of an opiate plaster to the chest appeared to be of much service in this instance. Dr. Dewees says, "we have never employed any remedy of equal efficacy with the garlic in substance, to relieve the cough of habit after whooping-cough. We have very often used it; and we have rarely

seen it fail. The objections arising from its smell are, however, very strong in the minds of some; so much so, that they cannot be prevailed upon to use it. But children of six or seven years, or even older, can very often be prevailed upon to eat it, and become after a while very much attached to it. A child of six or seven may begin by taking a third of a common-sized clove, morning, noon, and evening; gradually increasing the dose as the system becomes accustomed to its action. One of ten may take half a clove three times a-day, increasing it as it may be necessary; and so on for greater ages." (P. 418.)

In the acute stage of the disease, topical remedies can rarely be useful; but afterwards "external applications may be advantageously resorted to,—such as liniments of an irritating nature, as the volatile or the camphorated, the spirit of turpentine mixed with olive-oil, or the juice of garlic, rubbed along the vertebral column. But, above all, we think we have observed more advantage to result from the use of the tartar-emetic ointment, than from any other external application; this should be applied high up between the shoulders.

"It is well understood how much the action of the lungs is dependent on a nervous influence from the spinal marrow; and it is probably on this principle the efficacy of such embrocations is to be explained. The muscles of the chest, diaphragm, and scapulæ, receive portions of the cervical and dorsal nerves; the accessory nerves of Willis form a part of the par vagum, and assist in giving rise to the cardiac and pulmonary plexus: hence the propriety of applications to the spine; and hence the popular opinion of the utility of a Burgundy-pitch plaster between the shoulders is accounted for from anatomical arrangement." (P. 419.)

The progress and treatment of *Croup* are dwelt upon with an attention demanded by the importance of the subject. The only peculiarity we notice consists in the exhibition of Coxe's hive-syrup, above mentioned, during the first stage, either as an expectorant or as an emetic, if necessary. The warm bath is decidedly disapproved of. In the third, "the congestive stage" of Dr. Dewees, it appears that the *Polygala seneca*, in very strong decoction, is preferred in America to expel the membrane obstructing the trachea. The following is the formula recommended by Dr. Dewees:—

"Take half an ounce of powdered seneca; pour on it half a pint of boiling water, and let it simmer until nearly half reduced; strain it carefully, and give a tea-spoonful every fifteen or twenty minutes, until it puke. This quantity will answer for a child from one to three years old; for one of greater age, two tea-spoonsful at a time may be given; but we believe the decoction should never be weaker than the above."

The medicine exhibited in this strength is apt to run off by the bowels. To restrain the purgative operation, a few drops of laudanum may be added.

The use of spirits of turpentine is suggested, from its undisputed influence upon the mucous membranes. In one case, Dr. Dewees thought it of service in the third stage. The operation of tracheotomy is disapproved of under any circumstances; and the opinion of Cheyne is referred to, as an additional confirmation of its inutility. If attacked

early, and with adequate means, the author thinks "there are few diseases so entirely under the control of medicine." We consider this opinion as too strongly expressed.

We sought in vain for some vermifuge medicine, in the observations of the author upon *Worms*, which might fill the blank in our catalogue of remedies. The pink-root (the *Spigelia Marylandica*), with which we are well acquainted in this country, is considered a valuable article, particularly to expel the *ascaris lumbricoides*. We have frequently found it efficacious. Its operation, however, is occasionally violent and painful. Dr. Dewees has prescribed it many hundred times, and in only one instance has he witnessed any distressing symptoms from it; the occurrence of which he attributes to the medicine being exhibited in too large doses.

Upon the subject of *Scarlatina*, Dr. Dewees observes, "This is reputed to be a contagious disease. On this point, however, the evidence, to say the least, is equivocal. The facts connected with the spreading of scarlatina seem to be perfectly explicable, on the ground of its being epidemic, and not contagious." (P. 467.) We have no doubt ourselves that scarlatina is contagious.

In the chapter on *Measles*, it is stated that it is not settled "whether the constitution can be made to suffer the rubeolous action a second time: evidence is so entirely contradictory on this point, that it would not be safe to draw a positive conclusion either in favour or against it. One thing we, however, may safely declare, that, if it be taken a second time, it is contrary to the ordinary character of this disease." (P. 471.) Dr. Dewees, we presume, is not aware of the cases published by Dr. BAILLIE, in which measles occurred twice in the same children. We have seen similar instances, even where the first disease had been attended by the characteristic catarrhal symptoms of the complaint. No mention is made of that very common modification of measles, the *rubeola sine catarrho*. This species of the complaint certainly does not exempt children from future attacks of the more usual form of the disease.

We cannot, indeed, but consider this chapter as too superficial, considering the importance of the disease of which it treats. There are many points of high interest, with which the young practitioner should be well acquainted, that are altogether omitted.

We pass over a few other chapters, which treat of *Nettle-rash*, *Burns*, *Whitlow*, *Discharges from the Vagina of young Children*, &c. &c.; as they contain nothing more than brief sketches of the opinions generally entertained, and acted upon in this country.

We cannot conscientiously state it as our opinion that the fame of Dr. Dewees will be materially increased by the present publication. In the first part, trifles are certainly dwelt upon with unnecessary labour; whilst, in the second, we have to regret that we are favoured with but very superficial sketches of many interesting subjects. Some, indeed, of the highest importance are passed over without any notice. It is true the author professes to treat only of those diseases which are incidental to American children; but we can scarcely suppose that inflammation of the brain and its membranes never occurs in children on the

other side of the Atlantic; or that the term of Hydrocephalus, which in this country so incessantly assails our ears, is altogether unknown in America.

As a compilation from the best works upon the Diseases of Children, if we are to include those published in this country, the volume we have just noticed is certainly deficient.

MEDICAL AND PHYSICAL INTELLIGENCE.

PATHOLOGY.

1. *Softening of the Stomach*.—AMONG the publications sent to us during the present month, is one entitled “*De Gastromalacia et Gastropathia Infantum*; auctore F. X. RAMISCH. Prague, 1824.”—Considerable attention has lately been excited by the frequent detection of a softened state of the stomach, or complete laceration of that organ, in children. The German practitioners, particularly, have paid great attention to the subject, and much interesting information and research will be found in Dr. GAIRDNER’s Paper, in the Transactions of the Medico-Chirurgical Society of Edinburgh. In our own Journal, also, for December 1824, and in the Repository for August 1815, Mr. NORTH has published some observations upon the same subject. The latter case is frequently referred to by Dr. Ramisch.

When *Gastromalacia*, or the softened state of the membranes of the stomach, is detected upon examination, the infant has generally exhibited, during life, anomalous symptoms of disturbance of the intestinal canal. Vomiting or diarrhœa, or both, are common, together with lingering febrile action, and much prostration of strength. To the symptoms supposed to be indicative of the mischief going on in the stomach, the term *Gastropathia* is applied by the author of the little book we are noticing. A great variety of names have been used by different foreign authorities to designate this destruction of the stomach, with which the continental practitioners are so much more conversant than ourselves. Mr. HUNTER considered it to be “digestion of the stomach after death.” (*Philos. Transactions*, 1772, vol. lxii. p. 447.) Several pages of reference to the works and papers of different writers are given, and will be consulted with much advantage by those who are particularly interested upon the subject.

The author has bestowed considerable pains to establish a diagnosis between the symptoms which precede the organic destruction of the stomach, and other infantile derangements of less serious import. In our opinion, he has failed in his laudable attempt, which he appears to have prosecuted with singular industry, if we may judge from the immense number of works he has quoted. The symptoms which are supposed particularly to indicate this affection, are such as are commonly exhibited in most cases of gastric disturbance. In their progress, they are not unusually complicated with others arising from disease of other parts.

This total or partial destruction of a portion of the stomach in infants has sometimes been detected after death, when the patient had not shown any symptoms during life which could have excited any suspicion of the nature of the malady.

Upon dissection, we generally find the cardiac extremity of the stomach dissolved, as if by some caustic preparation: in a few instances, the pyloric has been the suffering part. The size of the aperture in the stomach, and the colour of the edges of the opening and of the surrounding parts, are very various.

Prognosis.—Our opinion as to the termination of this disease must be at all times doubtful, although some cases have certainly terminated in recovery, when the assistance of the practitioner has been required at the commencement of the gastric disturbance.

The treatment must necessarily vary with the particular disposition of the infant. In some cases we shall have to contend with inflammatory action; in others, with pure debility of the system. Hence the conflicting opinions, which our author has collected with more labour than practical profit, upon the therapeutical part of the subject.

THERAPEUTICS.

2. *Effects of Strychnia in Epilepsy.*—A young man, aged thirty-two, had been subject to epilepsy from the age of twelve, having ten or twelve fits in the day. Every means of cure had been attempted, excepting the administration of strychnia. The sixth part of a grain was given by Dr. BROFFERIO, night and morning. For three days, the only observable effect of the medicine was, that the fits were shorter and less violent. A quarter-of-a-grain dose was then prescribed. The patient slept all night, and had no fit for the thirteen following days; but, on waking in the mornings, he complained of giddiness, and was not able to move the lower extremities: however, after dinner, all these symptoms disappeared. After these thirteen days of amendment, the patient experienced in the morning four fits, which were of short duration. The strychnia was now given in the dose of half a grain, and the fits ceased for twelve days; at the end of which time they were renewed, very slightly indeed, but enough to induce the Doctor to administer the medicine in doses of one grain. There was now an intermission of five days; but at the end of that time a very violent fit came on, in which the patient died. (*Repertorio Med. Chir. de Torino, Luglio.*)

3. *Curious Case of Dyspnœa, cured by the Application of a Bandage.*—"The relatives considered the case as quite hopeless: indeed, the mother said, as we were going towards the bed-room, 'You are quite too late, Sir; you can do no good.' Upon entering the room, I found the respiration so very laborious, and at times so interrupted, that I was of the same opinion. Bleeding and various other remedies had been tried during the three days preceding the time of my visit, without any good effect whatever. I directed the mother to make a

long and broad bandage, which we applied pretty tight round the thorax and a good part of the abdomen. The respiration gradually became more easy; and, in the course of twenty-four hours, it became so easy, that the poor patient could walk gently about the house.

"I leave your readers to form their own conjectures respecting the cause and cure of the disease. I may add, that the young woman, who was about twenty years of age, had enjoyed good health until about a week before I saw her, when she complained at times of more or less difficulty of breathing." (*Private Letter from Dr. GILBY.*)

Clifton; October 31st, 1825.

4. *Marvellous Effects of Acupuncture.*—This remedy, after having made a little impression in this country, has been enthusiastically received in France, and at length passed into Italy, where it has obtained an advocate in the person of Dr. CARBARO, who has published a long Essay upon this subject, which contains some startling propositions. He says that these needles may be passed with impunity through the largest blood-vessels or nerves. He advises them not to be kept in above fifteen minutes at furthest; and, if the pain suddenly shifts from the part where the punctures are made to some other, we are directed to follow and attack it in its new situation. The cases which our author relates of cures performed by acupuncture, include acute rheumatism, pleurisy, and convulsions. In pleurisy, we are told that three needles were employed, which were fairly pushed into the cavity of the chest. All these cures took place in a few minutes.

Dr. Carbaro next relates the result of some experiments made upon kittens, in the presence of several people, whose names are mentioned, and who are called upon to testify to their accuracy. Three kittens were plunged into cold water, and kept there until all signs of life was extinct; which being made evident to the bystanders, the Doctor next proceeded to endeavour to resuscitate them by frictions and other means; but in vain. At length, recourse was had to the acupuncture needles, which he passed through the heart, having previously cut off the hair from the chest opposite to the situation of this organ. At the end of fifteen minutes, the needle situated in the heart was observed to move. This leaping or moving went on increasing rapidly, and was followed by motions of the anterior extremities; then by respiration, by crying, and finally by the movement of the whole body.

Two other experiments are related, but they are too long for insertion; and, finally, the paper concludes with the successful application of the needles in a case of erysipelas of the head, with a threatening of phrenitis. "*It was beautiful to see,*" says the Doctor, "*the red colour disappearing a minute and a half after the operation; so that, in twelve minutes, the face had acquired its natural colour, the volume of the head had decreased, the eyes opened, the delirium vanished, together with the fever, and the cure was effected with the rapidity of lightning!*" (*Annali Universali, Agosto.*)

STATISTICAL MEDICINE.

5. Table of Admissions and Deaths at the Small-Pox Hospital during fifty Years, viz. from 1776 to 1825, inclusive : with the Rate of Mortality per Cent. in each year, (omitting Fractions.)

Year.	Admissions.	Deaths.	Rate of Mortality per Cent.	Year.	Admissions.	Deaths.	Rate of Mortality per Cent.
1776	374	80	21 in 100	1801	177	55	31 in 100
1777	497	125	25	1802	175	68	39
1778	269	74	27	1803	98	22	22
1779	351	136	38	1804	48	8	17
1780	175	53	30	1805	280	97	35
1781	646	257	40	1806	100	35	35
1782	122	52	42	1807	172	48	28
1783	382	121	32	1808	128	36	28
1784	351	127	36	1809	146	41	28
1785	314	108	34	1810	149	51	34
1786	175	57	29	1811	94	22	23
1787	362	106	29	1812	144	54	37
1788	142	49	34	1813	69	18	26
1789	285	107	38	1814	79	26	39
1790	192	68	35	1815	101	34	34
1791	277	89	32	1816	141	29	20
1792	188	58	30	1817	160	48	30
1793	558	134	37	1818	58	14	24
1794	213	72	33	1819	193	61	32
1795	180	48	27	1820	142	34	25
1796	447	148	33	1821	117	49	42
1797	51	14	27	1822	194	57	29
1798	265	69	33	1823	151	37	24
1799	151	43	28	1824	199	54	27
1800	250	68	27	1825	419	120	29
25 Years	7017	2277	32½	25 Years	3743	1118	30

(Dr. GREGORY's Report.)

6. *Table of the Numbers Vaccinated at the Small-Pox Hospital during twenty Years, (divided into four Periods, of five Years each.)*

Period.	Years.	Numbers Vaccinated annually.	Numbers Vaccinated in five Years.
First Period	1806 946	7004
	1807	..... 1577
	1808	..... 1246
	1809	..... 1515
	1810	..... 1720
Second Period	1811 1458	9339
	1812	..... 1939
	1813	..... 1831
	1814	..... 1671
	1815	..... 2440
Third Period	1816 2313	13,348
	1817	..... 3124
	1818	..... 2161
	1819	..... 3328
	1820	..... 2422
Fourth Period	1821 2842	16,666
	1822	..... 3368
	1823	..... 3129
	1824	..... 3324
	1825	..... 4003
Total vaccinated in 20 years, at the Small-Pox Hospital			46,357

(Ibid.)

7. *Table of the Diseases, Casualties, &c. within the City of London and Bills of Mortality, from December 14, 1824, to December 13, 1825; according to the Reports made to the King and to the Lord Mayor, by the Company of Parish Clerks.*

DISEASES.					
Abscess	89	Fever (Typhus)....	86	Palpitation of the Heart 2	
Age and Debility ..	1528	Fever, Intermittent,		Palsy	116
Apoplexy.....	317	or Ague	1	Paralytic.....	35
Asthma	816	Fistula.....	5	Pleurisy	8
Bedridden	2	Flux.....	10	Rheumatism	19
Bile	6	Gout.....	26	Scrofula	10
Cancer.....	95	Hæmorrhage	31	Small-pox	1299
Consumption	5062	Hernia	20	Sore Throat or Quin-	
Convulsions	2662	Hooping-Cough....	420	sey	15
Croup	82	Hydrophobia	4	Spasm	58
Diarrhœa.....	8	Inflammation	2196	Still-born.....	904
Dropsy.....	313	Inflammation of the		Stone	20
Dropsy in the Brain	751	Liver	130	Stoppage in the Sto-	
Dropsy in the Chest	65	Insanity	198	mach	21
Dysentery	5	Jaundice	27	Suddenly.....	125
Enlargement of the		Jaw-locked.....	2	Teething	408
Heart	12	Lethargy.....	1	Thrush.....	59
Epilepsy	40	Livergrown.....	3	Tumor	7
Eruptive Diseases ..	10	Measles	743	Venereal.....	5
Erysipelas	20	Miscarriage.....	1		
Fever	809	Mortification	279	Total of Diseases	20,672

CASUALTIES.

Broken Heart.....	2	Frighted	2	Shot	1
Broken Limbs	1	Killed by Falls and		Stabbed	1
Burnt	36	several other Acci-		Strangled	1
Choked	1	dents	95	Suffocated	3
Drowned.....	139	Killed by Fighting..	1	Suicides	42
Excessive Drinking.	3	Murdered	1		
Executed*	4	Poisoned.....	5	Total of Casualties .	354
Fond Dead	11	Scalded	5		

CHRISTENED.

Males	12,915	In all, 25,634
Females ..	12,719	

BURIED.

Males	10,825	In all, 21,026
Females ..	10,201	

Whereof have died,

Under Two Years of Age	6419	Fifty and Sixty	1746
Between Two and Five ..	2061	Sixty and Seventy	1740
Five and Ten.....	867	Seventy and Eighty	1568
Ten and Twenty	877	Eighty and Ninety	622
Twenty and Thirty	1485	Ninety and a Hundred ..	72
Thirty and Forty	1698	A Hundred	1
Forty and Fifty.....	1831	A Hundred and One	1

Increased in the Burials this Year, 781.

SURGERY.

8. *Re-union of a Nose, which had been completely separated.*—Notwithstanding the many experiments that have been instituted, and the various facts that have been recorded, in proof of the power which nature possesses of re-uniting parts which have been completely and for some time separated from the body, there is still a disposition, on the part of some practitioners, to smile with incredulity at these statements, and to omit to take advantage of the opportunities which accident may afford them of putting their accuracy to the test. Within the circle of our own knowledge, for instance, a case lately occurred, in which the patient was suffered to remain permanently maimed, from this unwarrantable scepticism. A man had two fingers completely separated from his hand, near the metacarpal extremities, by a sharp and clean axe. A surgeon (by title) saw the patient in less than five minutes. The stumps were dressed *secundum artem*, but no attempt was made to re-unite the yet warm fingers to the separated part. Success would, in all probability, have attended the experiment; and the man would have been enabled to support his family, instead of becoming a charge upon his parish,—which is now, in fact, the case.

The following abstract of an instance in point we take from one of the best German Journals of the day:—

An unfortunate tailor, by the name of Gruzlewski, seated himself in a window, one wing of which he had opened. A sudden and violent gust of wind shut it with considerable force, and a part of the glass which was broken carried off a great portion of the man's nose. The separated piece was about the length of a finger, and the whole breadth of the nose. It fell from the second story of the house into the street.

* There have been executed within the Bills of Mortality, 15; only 4 have been reported as such.

The circumstance occurred about seven o'clock in the evening. A surgeon was immediately sent for, and he was satisfied with merely applying a plaster. Another surgeon, however, was consulted two hours after the accident. He sought for the nose with a candle in the street, and placed it in its natural situation. In a few days it had united, and regained its warmth and sensibility. The only mark of the accident which remains perceptible is a small, narrow, red scar.

It is observed, that the magistrates would testify the truth of this relation, if it were considered necessary.

A similar case is also recorded in the same Journal, in which complete union took place, where the nose had been entirely separated. (*Journal der Chirurgie und Augen-Heilkunde*, von GRAFE und WALTHER; band 7, heft 4.)

For much interesting information upon the subject of the re-union of divided parts, we refer our readers to a publication of WIESMANN, "De Coalitu partium a reliquo Corpore prorsus disjunctarum."

9. *Gangrena Senilis*.—DUPUYTREN recommends the application of leeches in this form of complaint. By their frequent application, he cured an old woman, of sixty years of age, in the Hôtel Dieu. The usual sedative, antispasmodic, tonic, and antiseptic means, had been tried in vain. The authority of this eminent surgeon is doubtless to be received with much attention; but yet we may be allowed to doubt, not from any abstract opinions upon the subject, but from attentive observation, whether there are many cases of true gangrena senilis in which we can venture upon debilitating means of any kind.

MIDWIFERY.

10. *Case of Abdominal Pregnancy*.—CHARLOTTE N—, thirty-six years of age, of a strong constitution, mother of six children, suffered, for some years, from all the presumptive symptoms of pregnancy; added to which, there was a constant pain at the lower and left side of the belly. This pain was at times very severe. Menstruation was not suppressed, but a discharge of blood from the vagina generally occurred once in six or eight days. Nevertheless, the patient's health was not much disturbed. About six weeks prior to the presumed period of her pregnancy, Mrs. N— had been washing, and of course had bent her body forwards. This motion was followed by a sound as if something had broken in the abdomen; and at the same time a tumor, the size of two fists, became apparent below the umbilicus on the right side. The patient fell down senseless, and was carried home. She felt for six weeks dull pains: after this period, labour-pains came on, and a midwife was sent for. For two nights these pains continued, and the uterus was sufficiently dilated to admit a finger. The tumor before spoken of had disappeared on the commencement of the pains; and, on the third day, these ceased altogether; the patient only complaining of some weakness, and a distention of the abdomen.

Things remained in this state for two or three months; the menses were regular, but not abundant. At length, symptoms of a fresh

pregnancy occurred, which went on regularly to the seventh month; at which time the parietes of the abdomen assumed a bluish tint, and the slightest movement discovered a fluctuation in the cavity. At length, at the usual period, the patient was delivered of a large male infant, which she nourished for fifteen days, but which died at the end of nine weeks. The mother lost her milk.

The moment she ceased to give suck, she lost all her strength; complained of a fixed pain in the belly, with fever, and agitation during the night; and her emaciation was extreme. A tumor, similar to that which had appeared before, showed itself an inch below the navel: it was the size of a hen's egg, and it broke by two small orifices, discharging some pus. A surgeon was sent for, who enlarged the opening, and a considerable quantity of purulent sanies escaped, with portions of skin and hair; and, on feeling the tumor, hard substances like bone were felt. Another eminent surgeon was consulted, who found the patient sinking under hectic fever. The uterine orifice was firmly closed, and nothing demonstrating the presence of a foetus was traceable there; but it was evident that one existed in the abdomen, and it was determined to extract it by an operation, which was thus performed:—

The bladder and rectum being both emptied, the patient was placed on a table, each foot resting upon a chair. An incision, of fifteen lines in length, was then made in the lineæ alba, two and a half inches above the umbilicus, and the peritoneum divided with the greatest precaution; then, passing the index and middle finger within the opening from above downwards, the operator raised the abdominal parietes, and then, passing the bistoury in the groove between the two fingers, the incision was continued through the lineæ alba to nine lines above the pubes. The exit of the intestines was prevented by means of a linen cloth, oiled, which an assistant stretched over the wound as soon as the parts were divided. This being done, a foetus at the full period was perceived, situated to the right of the uterus; the head corresponding to the same groin, the back to the iliac fossa, and the feet, slightly bent, towards the right hypochondrium; the left shoulder at the inferior part of the umbilical region, precisely where the fistulous opening above mentioned had been. The dead foetus was removed; the chord was found wrapped round the fundus of the uterus, then turned upon its left side, and was buried in a vascular network in a state of suppuration, probably the remains of the placenta, which was found between the epiploon. This pus was absorbed by means of a sponge; the wound was brought together by sutures, and dressed.

Inflammatory symptoms threatened the life of the patient for some days: it was only at the end of a week that hopes of her recovery were entertained, which were at length realised. She quitted her bed on the fifty-fifth day. The operator's name was M. BUTH. HUFELAND'S *Journal*, May.)

CHEMISTRY.

11. *Analysis of Opium*.—M. ROBIQUET presented to the Royal Academy of Medicine some observations on the new analysis of opium,

by the action of watery solutions of muriate of soda, according to the method of M. ROBINET. This chemist does not think that the organic alkalies exist in vegetables combined with ordinary acids, but rather with particular substances which fulfil the same functions; such as colouring principles. The acids of vegetables would combine, by preference, with earths, or the fixed alkalies of plants.

Having repeated the experiments of M. Robinet to separate the morphia of opium, he obtained a pitchy precipitate; and the supernatant liquor, when filtered, being boiled and treated with ammonia, precipitated very little morphia: the remainder of the liquor let fall a grained precipitate, which, when purified and examined, was found to be a *muriate of morphia*. M. Robiquet is then of opinion that the pretended *codeate* of morphia is only a muriate, easily recognised by the vapours which it exhales with concentrated sulphuric acid, as well as by the precipitate which it yields with nitrate of silver. The muriate of soda, announced by M. Robinet, results from a change of bases, very common in complex combinations. M. PELLETIER observes, that he has also made out that the codeate is merely a muriate. (*Archives Generales*, November.)

MISCELLANEOUS.

12. *Prize Essay*.—The Royal Medical Society of Edinburgh propose, as the subject of their Prize Essay, the following questions:—

1st, What is the respective agency of the veins and the lymphatics, in the process of absorption?

2d, By what means, or mechanism, do these vessels accomplish this process? What are the proofs which show that the substances absorbed are taken up by open mouths or orifices, or pass through the coats in the manner of imbibition or transudation?

3d, Is there any reason to believe that the individual animal tissues possess a distinct power of absorption, or that this process is influenced by the nature of the animal tissues?

The sum of twenty guineas, or a medal, or a set of books of that value, will be given to the author of the best Dissertation on the subject proposed by the Society; for which all men of science are invited to compete.

The Dissertations may be written in English, French, or Latin; and must be transmitted to the Secretary on or before the 1st of December, 1826; and the adjudication of the prize will take place in the last week of the month of February following.

To each Dissertation must be prefixed a motto; which must likewise be written on the outside of a sealed packet, containing the name and address of the author. No Dissertation will be received with the author's name affixed; and all Dissertations, except the successful one, will be returned (if desired,) with the sealed packet unopened.

MONTHLY CATALOGUE OF MEDICAL BOOKS.

A Toxicological Chart; exhibiting at one view the Symptoms, Treatment, and Modes of Detecting the various Poisons, Mineral, Vegetable, and Animal: to which are added, Concise Directions for the Treatment of Suspended Animation. By WILLIAM STOWE, Member of the London College of Surgeons.—London.

Researches into the Nature and Treatment of Dropsy in the Brain, Chest, Abdomen, Ovarium, and Skin; in which a more correct and consistent Pathology of these Diseases is attempted to be Established, and a New and more Successful Method of Treating them, Recommended and Explained. By JOSEPH AYRE, M.D. Member of the College of Physicians, &c.—London, 1825.

The Anatomy of the Fœtal Brain; with a Comparative Exposition of its Structure in Animals. By FRÉDÉRIC TIEDEMANN, Professor in the University of Heidelberg, Member of the Academy of Sciences of Munich and Berlin, &c. &c. Translated from the French of A. J. L. JOURDAN, by WILLIAM BENNETT, M.D. To which are added, some late Observations on the Influence of the Sanguineous System over the Development of the Nervous System in general. Illustrated by 14 Engravings.—Edinburgh, 1826.

Further Observations on the Medicinal Leech; including a Reprint, from the Philosophical Transactions, of Two Memoirs, comprising Observations on the Hirudo Vulgaris, or Common Rivulet Leech; and on the H. Stagnalis and H. Complanata, now constituting the Genus Glossopora. With illustrative Engravings. By JAMES RAWLINS JOHNSON, M.D. F.R.S. F.L.S. Corresponding Member of the Society of the Faculty of Medicine, Paris; Honorary Member of the Physical and Natural History Society, Geneva; Extraordinary Member of the Royal Medical Society, Edinburgh; and late one of the Physicians to the Bristol Dispensary.—London, 1825.

An Enquiry into the Nature and Extent of the Rights, Privileges, and Powers, of the Faculty of Physicians and Surgeons of Glasgow; containing Commission from King James, Seal of Cause from the Magistrates of Glasgow, and Act of Parliament in favour of the Corporation of Chirurgeons and Barbers in Glasgow. By ALEXANDER ADAM, Surgeon; Member of the Faculty of Medicine, Glasgow; and of the Medical and Chirurgical Association, Greenock.—Glasgow, 1824.

Remarks on some parts of Mr. Calvert's Treatise on Diseases of the Rectum; namely, Hæmorrhoids, Simple Stricture, and Spasmodic Constriction of the Sphincter Ani. By W. WHITE, Member of the Royal College of Surgeons, London; Corresponding Member of the London Medical Society; and one of the Surgeons to the City Infirmary and Dispensary, Bath.—Bath, 1825.

Guilielmi Harveii Exercitationes de Motu Cordis et Sanguinis; quas Notis pauculis instruendas curavit THOMAS HINGSTON, M.D., Societatis Regiæ Medicæ Edinburgensis Socius, nunc ex Collegio Regiæ Cantabrigiensi.—Edinburgh, 1824.

A Letter to Astley Cooper, Bart. F.R.S., Surgeon to the King, &c. &c., on certain Proceedings connected with the Establishment of an Anatomical and Surgical School, at Guy's Hospital. By J. H. GREEN, F.R.S., Professor of Anatomy to the Royal Academy; Professor of Anatomy and Surgery to the Royal College of Surgeons; Surgeon to St. Thomas's Hospital; and Lecturer on Anatomy and Surgery at that Hospital.—London, 1825.

A Treatise on the Physical and Medical Treatment of Children. By WILLIAM P. DEWEES, M.D. Member of the American Philosophical Society of Philadelphia, and of the Philadelphia Medical Society; Lecturer on Midwifery, &c.—Philadelphia, 1825.

Report of the Physician, laid before the General Court of the Hospital for Casual Small-Pox and Vaccination, at St. Pancras; held December 1, 1825.—London, 1826.

De Gastromalachia et Gastropathia Infantum. Auctore F. X. RAMISCH.—Prague, 1824.

Anatomie du Cerveau dans les quatre Classes d'Animaux Vertébrés, comparée spécialement à celle du Cerveau de l'Homme. Par LAURENCET, de Lyon; avec Planches. Paris, 1825.

Manuel du Pharmacien; ou, Précis Elementaire de Pharmacie, par A. CHEVALLIER, &c. &c. et par P. SAT, de Lyon. Tom. I. et II.—Paris, 1825.

(Others have been received, but are omitted from want of room.)

METEOROLOGICAL JOURNAL.

From December 20, 1825, to January 19, 1826.

	MOON	Rain gauge	THERM.			BAROM.		DE LUC'S HYG.		WIND.		ATMOSPHERIC VARIATIONS.		
			6 A.M.	MAX.	MIN.	6 A.M.	10 P.M.	6 A.M.	10 P.M.	9 A.M.	10 P.M.	9 A.M.	2 P.M.	10 P.M.
Dec														
20			48	48	46	29.32	29.28	84	84	ESE	SE	Fine	Fine	Fine
21		.10	48	50	46	29.34	29.38	83	92	SSE	SSE	Fine	Fine	Fine
22			46	47	40	29.42	29.60	90	84	WNW	WNW	Fair		Sleet
23		.10	40	48	36	29.73	29.61	89	87	W	WSW	Fine		Fine
24			37	41	41	29.90	30.11	84	84	W	WSW	Foggy		Rain
25	○		47	48	37	29.61	29.77	94	71	SW	NW	Fair		Fine
26			38	43	29	29.77	29.65	80	73	W	N	Fine		
27			30	43	30	29.72	29.67	78	73	WNW	WNW			
28			32	36	33	29.53	29.48	76	79	W	W			Foggy
29			33	36	32	29.46	29.46	84	84	N	N			Fine
30			33	34	28	29.49	29.55	90	87	N	W			Cloud.
31			29	34	28	29.61	29.65	87	84	WSW	WSW			Fine
Jan.														
1	☾		36	41	39	29.63	29.61	92	89	SSE	SSE	Rain	Rain	Cloud.
2			38	41	32	29.67	29.69	81	81	SE	ESE	Fine		Fine
3			35	35	34	29.71	29.75	80	84	E	E			
4			35	36	35	29.76	29.76	81	81	ENE	ENE			
5			36	36	35	29.75	29.71	82	92	ENE	E			Rain
6			36	36	35	29.57	29.61	92	92	E	E	Rain	Rain	
7			35	36	32	29.68	29.75	84	79	ENE	ENE	Cloud.	Fine	Cloud.
8	●		43	33	25	29.80	29.87	72	67	E	NE	Fine		Fine
9			28	33	24	29.90	29.85	67	71	ENE	NE			
10			25	30	29	29.67	29.55	76	78	N	WNW			
11			30	33	22	29.56	29.62	85	80	NW	NW	Snowy		
12			25	31	21	29.65	29.71	82	75	W	WSW	Fine		
13			22	29	20	29.81	29.81	80	78	W	W			
14			21	27	19	29.93	29.96	82	85	W	NNE	Foggy		Foggy
15			20	29	19	30.12	30.26	90	85	NNE	NE			
16	☽		20	28	20	30.37	30.41	85	85	NE	SSE			
17			25	32	27	30.44	30.44	88	82	SSE	S	Fine		Fine
18			30	36	37	30.34	30.13	87	85	SW	SW			
19			40	42	36	29.97	29.97	93	85	WNW	N			

The Rain-gauge having frozen, no account could be taken of the quantity of Rain fallen.

NOTICE TO CORRESPONDENTS.

We beg to acknowledge the receipt of Dr. MARSHALL HALL's polite Letter. We shall be happy to hear from him again.

We thank Dr. DEWEES for his Letter, and his Work on the Diseases of Children. We have analysed it in our present Number.

We regret very much that we cannot give insertion to the Observations on Hemorrhage. They are, in general, correct; but the Author will find his views anticipated in most elementary works upon the subject: they are true, but not new.

The Paper of ΑΔΕΛΦΟΣ is not fitted for this Journal. We cannot become the advocates of the Court of Examiners: the first page of the Wrapper contains an insuperable obstacle.

The Communication containing Remarks on Dr. DAVIS's Work on Operative Midwifery does not appear to us sufficiently practical or important for insertion.

The Case of Intestinal Hemorrhage is not fit for publication.

The same applies to the Remarks on Probes and Sounds.

The Communications of Mr. BROWN and Mr. WADE have been received.

THE LONDON
Medical and Physical Journal.

NO. 3 OF VOL. LV.]

MARCH, 1826.

[NO. 325.]

For many fortunate discoveries in medicine, and for the detection of numerous errors, the world is indebted to the rapid circulation of Monthly Journals; and there never existed any work, to which the Faculty, in Europe and America, were under deeper obligations, than to the Medical and Physical Journal of London, now forming a long, but an invaluable, series.—RUSH.

ORIGINAL COMMUNICATIONS,
SELECT OBSERVATIONS, &c.

ART. I.—*General Observations on Pathology.* By WM. STOKER, M.D. senior Physician to the Fever Hospital and House of Recovery, Cork-street, Dublin.

PREVIOUS to the further illustration of the pathological principles* adopted in my work on Dropsy, which I intend to deduce from the intimate correspondence between the intensity of the symptoms and that of the disorder of the animal fluids, in the aggravated forms of epidemic prevailing in this country for the last three years, I am desirous to review the evidence I have already offered in support of these principles, inasmuch as I am very apprehensive that, without such a retrospect, the facts which my opportunities enable me to bring forward on a question which I think deeply interesting, both to physicians and their patients, would not receive that patient and due consideration which they deserve. And besides, the observations I have to bring forward merit attention chiefly (as it appears to me,) from their connexion and accordance with those arguments and facts on which I had first promulgated my pathological opinions.

Whilst, therefore, I wait the close of *this*, which may be but too truly entitled "*læthiferus annus*," in order to complete those numerical statements which I am preparing in the concise form of Tables for the years 1823, 24, and 25, I beg leave, as briefly as I can, to offer, with a view to such a retrospect, some observations on the origin of the exclusive pathology of the solidists, as now inculcated in the schools of Physic,—on the imperfections necessarily attached to such a system,—and, lastly, on the failure of its partisans, especially as respects the

* I regret that my efforts to establish these principles have been sometimes mistaken for attempts to restore the old humoral pathology; and, therefore, think it necessary to add, that I should deem the exclusive pathology of the fluids necessarily as imperfect as that founded solely on the solids.

pathology of fever, to form a correct *rationale* as to the nature or treatment of that disease.

It would be necessary to go back to very early periods in the history of medicine, to trace the errors of this exclusive system from their origin, and to examine the causes of the various revolutions this science has undergone in successive ages,—causes which, I think, would be found not so intimately connected with want of zeal or talents in any of the methodical, mechanical, chemical, or anatomical sects of physicians, as with the dispositions of each to advocate their theories by their own creeds exclusively, and to detect with microscopic eye the fallacies or fictions of those which differ from them. So extensive an inquiry, however, would be incompatible with the limits to which I should here confine myself; and, as I can refer to the works of the learned CABANIS, which are very full on that subject, I may commence from the period when CULLEN, BROWN, and DARWIN, by the aid of their extraordinary abilities, and the influence on medical opinions which their high characters had, transferred to Great Britain the doctrines of solidism, which had been previously promulgated on the continent by the eloquence of STAHL, HOFFMAN, and BAGLIVI.

Influenced by the dogmas of these distinguished British physicians, medical writers and lecturers thenceforward framed all their theories, (but fortunately not entirely their practice,) taking little or no account of the state of the fluids in disease; notwithstanding that SYDENHAM's practical observations, as well as BOERHAAVE's more theoretic writings, had till that time taught that the condition of the blood, and of its derivative fluids, in disease, should form necessary parts of pathology.

The new theorists were too acute observers not to perceive that the destruction of previous systems, at least so rapidly, was owing to their not bearing the test of the analytical method, which had been employed so effectually for the detection of error in the other sciences: they gave theirs, therefore, as much as possible, the semblance of being founded according to inductive philosophy. In their explanation of the phenomena of diseases, no particular notice of the condition of either solids or fluids was taken, and presented little more than a brief exposition of the principal symptoms, ingeniously interwoven with either an imaginary hypothesis of a proximate cause or essence of disease, dependent either on a transient condition of the solids, which could not be submitted to subsequent investigation, or connected with abstruse ideas of the laws of the animal economy, which the metaphysicians of that day pretended to have discovered, and by them vainly attempted to disclose the occult and ultimate relations between the operations of mind and body; and, assuming them as data, employed arguments which would

lead to materialism in the moral, as certainly as to solidism in the physical, world. But, however well contrived these fictions might be for deception, they soon sunk into well-merited contempt, under impartial and vigorous scrutiny.

But, though that system of pathology now known by the name of Solidism was first introduced into England, and is still to a certain degree supported there on such speculations, it was in the founders of the great Anatomical School at Windmill-street that it was sustained by its ablest and warmest advocates, who, conscious of their extensive powers, derived from their anatomical skill in post-mortem examinations, laboured with unwearied industry to form a system solely from the facts collected in examining the alterations of structure produced by diseases; a task recommended to their ardent minds, not only by attachment to their favourite pursuit, but also on account of its being opposed in principle to those untenable parts of the theories of the humoral pathologists, which they had been successfully employed in exposing.

The immense array of facts which the distinguished brothers, WILLIAM and JOHN HUNTER, made for this purpose, during their widely extended inquiries in dissection, recorded in their literary works, as well as in their museums, has (independent of the great depositories since added by their pupils and followers,) been justly the theme of admiration, as well for the persevering assiduity which it evinces, as for the importance which has been attached to it, or the influence which it has ever since had on those making similar collections, or on the improvements in medicine, but more particularly in surgery. Indeed, without meaning any conceit unsuitable to so solemn a subject, it may be said of the deathless name they have laboured so effectually to establish, that, however "the evil they did might live after them, the good was not interred with their bones;" for there is scarcely any civilised country which does not at present possess either copies of their works or models of their museums. Fortunately it is only necessary to refer thus generally to these works, and I shall confine my observations to that faithful epitome of them entitled the "*Morbid Anatomy*," the text-book of dissectors since its publication; a work with which the well-earned fame of the late lamented Dr. M. BAILLIE is intimately connected, and which was no less indebted for its celebrity to its author's highly respected name. In it the views of his distinguished relatives in collecting preparations during the dissection of morbid parts, to which he was, even during their life-time, an active and large contributor, are zealously and ably extended by all that his own extensive opportunities, as lecturer in the great school of Anatomy, presented in favour of similar principles. It was composed, indeed,

with the avowed object of explaining, "more minutely than had hitherto been done, the changes of structure arising from morbid actions in some of the most important parts of the human body;" and, I might say, never would have led to the errors which others have committed under the affectation of having its sanction, if the subsequent attempts to found a purely solid pathology had been guided by the caution with which he advanced, and the faithfulness with which he delineated, those boundaries he had reached; or if, like him, they had candidly defined their objects for extending them.

As an illustration of this opinion, and an apology for the freedom with which I shall venture to discuss some subsequent parts of this work, I am induced to take the following extracts from its Preface:—"The human mind is prone to form opinions upon every subject which is presented to it, but, from natural indolence, is frequently averse to inquire into the circumstances which can alone form a sufficient ground for them. When, however, the mind shall be obliged to observe facts which cannot be reconciled with such opinions, it will be evident that such opinions are ill-founded, and they will be laid aside." And afterwards he says, "that anatomy may be said to have arrived at a high pitch of perfection; but our knowledge of structure produced by disease, which may be called morbid anatomy, is still very imperfect."*

Now, if the entire of the work be examined by the tests suggested in these extracts from its Preface, I feel well assured that the most accomplished anatomist would be most ready to acknowledge that, as a system of pathology, it is imperfect, even in the diseases treated of; for, in many cases similar to these, (especially such as are strictly medical,) the appearances stated to have been found on dissection, by which the previous symptoms were supposed to be accounted for, have been observed when no such corresponding symptom previously occurred. The converse of this is also true; for, when dissection presented no alteration of structure, such symptoms have preceded.

The frequency of such coincidences as those pointed out in the *Morbid Anatomy*, have no doubt afforded material assistance in diagnostics and prognostics; and, perhaps, it is on those points only that pathological information can be effectually promoted by such inquiries. Hitherto, at least, the views they afford do not extend beyond effects that may supervene, either soon after the commencement or shortly before the fatal termination of diseases, and therefore cannot, as the essential characteristics, guide the physician in prescribing—

* *Morbid Anatomy*, &c. &c. by M. BAILLIE, M.D. F.R.S. &c.—London, 1812.

“*Officium medici circa ægrum hominem est sanare.*”

I might quote numerous cases and dissections to support the foregoing assertions, but my limits necessarily confine me to reference; and I am persuaded that, if those which may be found in this and other periodical Journals, commencing with meningeal apoplexy, and proceeding with the affections of the viscera in all the other cavities, be impartially analysed, they will be sufficient to ensure a rigorous examination of those details which will constitute the additional evidence I have promised; and which is the most favourable reception I wish for them.

As the opinions of the author of the work we have been just considering, respecting those preternatural appearances which the blood drawn in certain diseases evinces must necessarily have influenced his notions of pathology, as well as those of all others who adopted them, they should not be passed unnoticed here; and I may confess additional gratification in referring to those experiments* which I instituted to prove their fallacy, since they have by some been considered decisive;† being fully convinced that, if I could thus succeed in abolishing this false principle of the anatomical sect of pathologists, which BACON would have ranked amongst the “*idola tribus*,” greater freedom to the investigation of truth would be the consequence, and facts more fairly appreciated. Those alterations from the natural condition of the blood, as indicated by the preternatural appearances it presents when drawn, could not fail to be esteemed as sufficient causes for the interruption of health, and adequate explanation of the symptoms of disease; as much so, surely, as those alterations in structure found after death, on which so much attention has of late been so beneficially bestowed. Perhaps, there is no circumstance more remarkable in the history of science, than that John Hunter, who had attributed, and almost proved, the paramount importance of the blood to life and health, should have rejected the opinion that morbid alterations in it must be succeeded by disease or death, so as to be now quoted as the successful champion of solidism, who had totally exploded the humoral pathology.

The various appearances of the blood drawn in disease, being no longer attributable to any process subsequent to extravasation or death, I have proposed the following explanation: that one kind of the sily surfaces, or buffy coats, is produced from disordered chyle, (the consequence of unwholesome aliment or impeded digestion,) not being duly prepared for the changes it

* See *Pathological Observations*, Part I. pages 37—40.

† See *Medico-Chirurgical Review*, June 1824; also *Quarterly Journal of Medical Science*, London, 1825.

should undergo in the minor circulation, the functions of which it disturbs, and then passes into the sanguiferous system, to be the source of morbid actions. Another kind arises from the morbid condition of the venous blood, in its return from the greater circulation by the vena portæ, unfitting it for the preparatory process which, in health, takes place in its passage through the liver, in order to qualify it to be duly affected by the functions of perfect sanguification, by which it was to be again refitted, in the pulmonary system, for the vital purposes of the greater circulation. Explanations which appear to be further supported by the experiments on the blood instituted since mine, in London and Paris; by which I am further led to hope that they will hereafter be found of practical utility, both in the *ratio symptomatum* and *methodus medendi* of diseases.

The explication given by Dr. SCUDAMORE of such sizzly appearances of the blood, I believe also applicable in many instances; for it is very probable that, when the state of the solids is such that they cannot receive the entire quantity of fibrine conveyed to them by the extreme arteries, it accumulates in the sanguiferous system, and is extraneous to the venous system, by which it is returned to the heart.

The various appearances which the blood presents in idiopathic and typhoid fevers, probably arise from changes effected on the vital fluid, by morbid matter supplied to the lacteal or lymphatic system by the absorbents, which, entering by the thoracic duct, I suppose has the same sedative influence which poisons have on the pulmonary and sanguiferous systems. This view of the subject may also assist in explaining the length of time, or latent period, between the application of contagion or infection, and the commencement of febrile paroxysms or morbid actions.

I hope, in the second part of my Pathological Observations, when I am able to bring them out, to enter upon the chemical properties of morbid blood, as it appears when drawn in both idiopathic and typhoid fevers, by which I am persuaded the further investigation of this subject will be promoted, but for which I had neither leisure nor sufficient knowledge of practical chemistry, when preparing the former part; but now hope to have it undertaken by one on whose skill and accuracy in chemical analysis I can fully rely. It may be said, indeed, that such considerations are more strictly physiological, and do not involve the facts of altered conditions of the blood, and their necessary effects in disease, which are most important in a pathological point of view.

The foregoing observations on the origin of the exclusive pathology of the solidists, and of its imperfections, respect medical diseases in general; and, before I proceed to remark on

the more recent failures of the partisans of that system, in which I intend to confine myself to the pathology of fever in particular, I shall take the opportunity of explaining a passage in the valuable Digest of the Study of Medicine, by Dr. J. M. Good, lately published, which I shall transcribe for that purpose, viz.

“The most triumphant fact in favour of the Boerhavean hypothesis is, that the crust on the blood in inflammations, and cauma or inflammatory fevers, is often found peculiarly dense. But, as fevers (and certainly the greater number,) are found without any such crust, and as a similar crust, though perhaps not quite so dense, exists under other and very different states of body, as in pregnancy and scurvy (*porphyra*), even this leading appeal has long lost its power of conviction; whilst the abruptness with which fevers make their assault from sudden occasional causes, and in constitutions of every diversity, forbids the supposition that in such cases a lentor or sisy crasis of the blood, and especially a *glutinosum spontaneum*, can have time to be produced, however, as it may exist occasionally, and be perhaps the source of other disorders. The subject, however, has of late been again taken up by Dr. Stoker, of Dublin, with a view of reviving the humoral pathology in its more important doctrines, and of extending the arguments which have hitherto been urged in its favour.”

Thus called upon, I object, “*toto cælo*,” to that part of the Boerhavean doctrines which attributes fever in general to the sisy condition of the blood, which it may be seen is the tenor of my works on that subject; and, so far from such sisy or buffy coats being the necessary attendants on fever, I questioned them even as proofs of inflammation, because they are found in dropsy and other diseases, where neither heat, pain, redness, or quick pulse, (the ordinary signs of inflammation,) preceded. In typhoid fevers, a condition of the blood, the very converse of the morbid one thus indicated, takes place, when the coagulum of the vital fluid is generally broken down, and its serum is of a dark, often of a greenish hue; and, in symptomatic fevers, the buffy coat, I think, generally indicates disturbed sanguification, which is sometimes the effect merely of inflammation. I should further observe, that I have never seen sudden solution of disease in cases where the buffy coat has been deep or dense; such as, Dr. Good very justly states, frequently succeeds slight hemorrhages from the nose or other parts.

My remaining observations on the failure of the partisans of solidism in the pathology of fevers, will consist chiefly of a narration of facts, justly styled the philosophy of history, which have passed under my notice in the great Fever Institution in Cork-street, during twenty-three years that I have been

physician to it. By comparing the doctrines which would place idiopathic fevers amongst the phlegmasia of CULLEN, manifestly the fruits of those metaphysical and anatomical theories, which I have already endeavoured to show were branches from the original stock of solidism, I shall state the process by which I examine their validity; but, as I have already, I fear, transgressed the limits for one insertion in this Journal, I shall reserve these remaining observations as a fit programme for the details of the epidemic, on which I intend next to enter.

York-street; December 8, 1825.

ART. II.—*Post-mortem Examination of an Apoplectic Patient.* By R. WADE, Member of the Royal College of Surgeons, and Apothecary to the Westminster General Dispensary.

POST-MORTEM examinations of persons who die apoplectic, too often add but little to our pathological knowledge; the appearances on dissection being frequently insufficient to account for the phenomena of the disease. When, however, the result of such examinations is satisfactory, a statement of the case cannot fail to be interesting; and as, in the following instance, not only more extensive injury in the brain than is generally found existed, but also an unusual state of disease in the plexus choroides, I am induced to request the favour of its insertion in the Medical and Physical Journal.

William Richardson, forty-two years of age, a strong muscular man, of a plethoric habit, by occupation a leather-dresser, and enjoying generally a good state of health, never having had any serious illness, (with the exception of a bowel-complaint twelve months ago,) until the present attack. On his return from work on the night of the 3d of January, he complained of being very unwell. On being questioned as to the nature of his illness, he said that he had a slight degree of pain in the head, and desired to have some warm gruel. His wife says, she had no reason to suppose, from her husband's appearance, that he had been drinking to any excess, either on this or any preceding day: on the contrary, she had always considered him a man of temperate habits. After having taken the gruel, he went to bed, and about one o'clock in the morning awoke his wife: he was then breathing with great difficulty, appeared very restless, and got out of bed, but immediately fell. Assistance was procured, and he was replaced in his bed, in a state of insensibility.

On my first visiting the patient, at ten o'clock in the morning (Jan. 4th), I found him apoplectic, with stertorous breathing, countenance extremely sunk, and of a pale blue colour; the pulse

at the wrist was slow and oppressed; the pupils dilated; the whole venous system appeared overcharged. On opening a vein in the arm, the blood gushed out as on the division of an artery, and thirty ounces were very quickly taken. The bleeding diminished the force, and increased the frequency, of the pulse; but not the slightest degree of relief was obtained by it. He was then ordered to be cupped to sixteen ounces at the nape of the neck, and ten grains of calomel were ordered; only a part of which, however, could be administered. An enema was also prescribed.

I saw him again at three o'clock, and found that no relief had been obtained: indeed, he was evidently dying; and expired at eight o'clock in the evening. I examined the body early next morning, and the following were the appearances which presented themselves:—

On removing the dura mater, which adhered very firmly to the cranium, the whole venous system on the surface of the brain appeared excessively distended; the tunica arachnoidea, over the anterior cerebral lobes, was of a dirty yellowish colour, from lymph which had been effused under it. I cannot convey a better idea of the appearance which the brain presented through the tunica arachnoidea and pia mater, than by comparing it to a damson-pudding: this appearance was produced by the congested state of the vessels of the cerebrum, and by the dark blood effused between the convolutions. On removing the tunica arachnoidea and pia mater, which were firmly agglutinated together in every part, and were thicker than the dura mater, the under surface of the pia mater strongly resembled the mucous membrane of the intestines in a high state of inflammation; the pia mater itself being of a dark crimson colour, whilst the veins, which were in every part distended to the size of a common quill, adhering firmly to the membrane, resembled in some parts the injected *valvulæ conniventes*, and in others the *rugæ* of an inflamed stomach. The whole internal surface of the pia mater was covered with a thin layer of venous blood, coated in many places with lymph. The effusion of lymph appeared to have taken place chiefly over the coats of the veins.—On opening the right ventricle, the corpus striatum was observed to be of a bluish-black colour: in its centre was a small portion of coagulated blood, double the size of a pea; the part round the coagulum presented the appearance of kidney. In the plexus choroides was a small tumor, the size of a large pea, which, on being cut, was found to consist chiefly of an earthy substance, and appeared like a small gland, thickly interspersed with a calcareous matter. The thalamus nervi optici was healthy.—In the left ventricle, the pia mater, particularly in the anterior cornu, had a speckled appearance, from

ecchymosis. On dividing the corpus striatum on this side, a coagulum of blood, larger than that in the right ventricle, was found in its anterior portion; and the parts around it had the same kidney-like aspect as the other. The internal part of the thalamus had a mottled appearance, from little spots of ecchymosis. The plexus choroides on this side contained a tumor, precisely similar to that in the right ventricle; but the plexus itself was of a lighter colour.—No serum was contained in any of the ventricles; the middle one was quite free from disease. The velum interpositum was highly injected. The pia mater, on the base of the cerebrum, was in the same state as on its surface; as also that portion investing the cerebellum. All the sinuses were distended. Under the anterior part of the right lobe of the cerebellum, a small quantity of coagulated blood was observed. A careful examination was made of the arteries at the base of the brain: no ossification, however, was found.

The heart was rather larger than usual; the lungs healthy; about half a pint of bloody serum in the right pleura; the viscera of the abdomen sound.

ART. III.—*Remarks on Fever and Rheumatism; Case of Metastasis of Gout; and a Case of Coup de Soleil. Being Extracts from a Report of the Diseases which prevailed in the 2d Dragoon Guards, during the Year 1825.* By ANDREW BROWNE, Esq. Surgeon of the Regiment.

FEVERS.

UNDER this head, I include every class of disease in which the arterial action has been accelerated, and the temperature of the skin increased, preceded or ushered in by more or less languor and debility; and, as the greater portion of febrile cases of this character, treated between the end of December 1824, and the beginning of September 1825, were mild to a degree, and required but a very short period of confinement to hospital, or indeed any great degree of solicitude, I shall now pass them over without comment, and limit myself to a description of the epidemic, which first appeared amongst us about the latter period; having then changed the mild garb it formerly wore, and perceptibly assumed that of synochus.

About the latter end of August and beginning of September, our febrile admissions augmented rapidly, and their character likewise manifestly changed, having become more acute and obstinate. But, on the commencement of the continued rains in this latter month, the symptoms became highly aggravated, and continued in an increased ratio, until checked in some degree by the light nocturnal frosts in the beginning of November.

And I here consider it worthy of remark to state, that, at the commencement, or during the early part of this disease, it was principally confined to those men recently relieved from the coast-duty, and to the soldiers' rooms at the west end of the barracks: in a very short time, however, it gradually and insidiously advanced to the other extremity of the line, visiting slightly, in its passage, a few of the officers in the centre. But nearly every woman and grown child in each wing suffered severely from its attack; so that it became necessary to convert one of the attic stories of the men's barracks into an hospital for their accommodation. This I state merely as an occurrence, without attempting to advance an opinion, or even a supposition, that this fever was, in any instance, derived from the agency of contagion; although every precautionary measure that art and experience could suggest, as to cleanliness and comfort, was throughout most rigidly kept in practice. But I apprehend that both the remote and exciting causes may be safely ascribed to the late sudden transition of season; to cold, producing an increased impetus of the blood, with a determination to the abdominal viscera; to miasma; to want of natural rest and regular meals; to checked perspiration, &c.

Symptoms.—The leading symptoms generally complained of in this disease were, extreme depression of spirits, preceding loss of appetite; headache, lassitude, rigors; irritability of stomach, with an obtuse pain, or sense of weight, in the epigastrium, “as if of a burning coal;” with a frequent acute pain in the right hypochondrium, (often in both,) preventing the slightest contortion of the body; general soreness, and wandering pains, particularly severe over the loins and extremities; great prostration of strength; foul tongue; much thirst; a small, hard, frequent, vibrating pulse; skin dry, and considerably above the temperature of health. But the bowels frequently undisturbed, and often obstinately prone to costiveness; and, when brought into action by cathartics, the alvine excretions were invariably of a dark green colour, often black as pitch, and unusually fetid.

In many, however, the disease manifested itself, in the commencement, (as above described,) with considerable nervous irritability, which was evinced, even in the stoutest and most robust, by a copious flow of tears, previous to any answer given to our interrogatories; great prostration of strength; headache; anorexia; severe and constant pain over the whole abdomen, with soreness on pressure, and a copious purging of dark green slimy stools, having a peculiarly offensive smell, and without affording even a momentary relief; much thirst; the tongue covered, at its root, with a thick brown crust, soon spreading

over its entire surface. Pulse small and quick; skin hot and dry.

In the second stage of this epidemic, the pain in the epigastric and hypochondriac regions became gradually less acute, and painful only on pressure. The alvine excretions, always of a dark green colour, became now intermixed with long white shreds. Respiration frequent and anxious; occasional nausea, and vomiting a light green, frothy, bilious matter. Skin of the palms and tendons of the wrists tense; with constant mental alienation, and partial paralysis of the lower extremities. Urine scanty and high coloured; mouth distressingly dry and clammy. Pulse more moderate, and skin more temperate; without, however, the slightest perceptible exacerbation or remission after the seventh or eighth day.

The last stage was marked by a total cessation from pain or soreness; the patient always saying "that he was better," or "that he was very well." The tongue still dry and parched, of a logwood colour, but free from its original crust; and its action nearly lost, there being much difficulty in propelling it beyond the teeth. Excretions unaltered, and now passed involuntarily. Pulse scarcely perceptible, and the skin cold and clammy. Continual picking at the nose or bedclothes; subsultus tendinum; sinking down off the bolster to the foot of the bed; hiccup; and, in one instance, vomiting a dark brown grumous matter, so often noticed by West India writers on the bilious remittent fevers of those climates.

Post-mortem appearances.—The diseased appearances presented on dissection being all nearly similar, or at least without any essential difference in character, I herewith transcribe one of them from my register, which may tend to illustrate the foregoing account of the symptoms.

On lifting the sternum, twenty-five hours after death, and exposing the cavities of the thorax and abdomen, there exhaled from them a peculiarly offensive odour. In the chest, the lungs were found turgid; without, however, any vestige of recent disease, although the left lobe adhered firmly to the pleura costalis,—the effect, no doubt, of former inflammatory action. The heart and pericardium, with the other contents of this cavity, healthy. But the liver appeared fuller and paler than natural, with a large livid patch on the centre of its convex surface, and a dark slate-coloured fringe, or border, two inches deep, along the whole of its inferior edge, on both concave and convex sides, and penetrating into its substance about the sixteenth part of an inch. The peritoneum over the whole anterior surfaces, interspersed with small vesicles; and, on carefully dissecting the lobes from their respective connexions, and placing them on the table, they appeared preternaturally large,

and unusually soft and attenuated, incapable of resisting a moderate pressure of the finger; but nearly devoid of blood.

The gall-bladder perfectly empty, and its coats, with those of the bile-ducts, thickened and enlarged. The hepatic artery, after its entrance into the fissure of the liver, as well as the vena portæ, were likewise thickened in all their ramifications; exhibiting conclusive evidence of previous inflammation. The small lobe unusually large, but less disorganised.

The diaphragm, kidneys, and pancreas, comparatively healthy.

The spleen nearly double its natural size, resembling the liver in every particular; but, on cutting into its substance, it was found to contain much dark fluid blood.

In the stomach was found ten or twelve ounces of a dark tenacious matter, which, on being removed, the whole of its internal surface exhibited to view a number of starlike, vermilion coloured petechiæ; most numerous about the pyloric orifice.

The whole of the mesentery of a dusky claret colour, and its vessels filled with blood.

The brain and its meninges suffered, likewise, from recent inflammatory action. The vessels on the whole surface were unusually large, and distended with dark fluid blood; and about six ounces of serum were found in the ventricles. But the substance of the brain itself appeared tolerably healthy, although, perhaps, more firm than natural in its texture.

Treatment.—In every case admitted, there was always present more or less increased action of the sanguiferous system, and apparent congestion either in the liver or head,—generally in both. The treatment, therefore, in the commencement of this disease, was to abstract blood from the arm by a large orifice, until syncope was produced, or every vestige of the pain in the side and head ceased; the blood invariably exhibiting, a few minutes after abstraction, a buffy or inflammatory crust, peculiarly dense; and the robust and plethoric oftentimes losing *sixty-four ounces and upwards at the onset*, which very frequently had the effect of saving a repetition, and thereby consequent subsequent debility. However bold this practice may appear to many, I have long been fully confirmed in it, by observing its effects in arresting (in nine cases out of ten) the progress of the complaint at once, and thereby preventing frequent recurrences to the lancet, which often ultimately fail, and invariably hasten the debility attendant on the second stage of acute or inflammatory fevers; a circumstance very important to guard against.

The next step in the treatment was the evacuation of the contents of the stomach, by administering, shortly after the operation of blood-letting, small doses of a solution of tartarised antimony, until they produced a complete effect; with the view

not only of causing sufficient evacuation, but to relieve, by its action, the congestion in the liver, to determine to the skin, and to produce a direct and emulgent effect on the other viscera.

To this end, likewise, mercurial purgatives, combined with antimony or James's powder and colocynth, were administered every four or six hours, assisted by supertartrate of potass, neutral salts, or infusion of senna, until the bowels were well evacuated, and the alvine excretions assumed a natural colour, and less offensive odour.

Blisters were also occasionally had recourse to, where the wanderings of the mind were rapid, and the temper irritable and violent. They assisted likewise in restoring the balance of the circulation; but were, in general, rendered unnecessary by previous depletion and the free use of purgatives, diaphoretics, and saline effervescing draughts.

If, however, the employment of these means did not succeed in entirely subduing the paroxysm in its first stage, and the disease ran into the second, assuming a chronic form, mercury was forthwith exhibited, both internally and externally, with the most favourable result; as, the moment its action became visible on the system, I could confidently and unerringly pronounce the patient out of danger; and in many instances, where the mercurial purges alone, exhibited in the first stage of the disease, excited slight ptyalism or fetor of the breath, every symptom of the disease instantly ceased, and the alvine excretions resumed their natural colour. But, whether owing to the peculiarity of the disease or the constitution of the patient, the system, in many, most obstinately resisted every effort to excite a mercurial action, and this was particularly observable in those cases where the admission into hospital did not take place during the first stage. A copious purging of dark green bilious matter, with irritability of stomach, then became the leading symptoms.

Under these circumstances, after the use of effervescing aperients and blisters, recourse was necessarily had to stimulants and cordials, to prevent increasing debility and threatened dissolution; and, in every case of this description, the most unfavourable prognosis must reasonably be formed, the recovery being always tedious, and often imperfect, leaving a strong disposition to chronic hepatitis; of which we have still five cases remaining in hospital, requiring some care, and an occasional mercurial purge.

But, in every description of this epidemic, whether in an early or advanced state of convalescence, I soon discovered that the exhibition of bark in any form, or indeed of any other tonic, was invariably prejudicial, reproducing headache, dryness of skin, pain in the hepatic region, and a return of dark-coloured

slimy stools; while benefit was derived from a light nutritive diet, diluted port wine, and good strong Dorchester beer.

Under this plan of treatment, however severe and alarming the symptoms might have been on admission, (when this took place a day or two after the attack,) I felt perfectly easy as to the result; and, so far from inducing increased debility, too often and groundlessly dreaded in such cases, it has, on the contrary, not only procured the patient immediate relief from the severity of his sufferings, but an apparent renewal of strength and energy of system, on his perfect recovery; as, in no one instance where the early and vigorous employment of the measures herein described were had recourse to, has there been the slightest disposition to a recurrence; a result which I have long experienced in tropical as in temperate climates, on the low swampy shores of Demerara, Esequibo, Berbice, and Surinam, where heat and moisture are so powerfully combined, as on the high light soil of many of our West India islands, in Gibraltar, and now at home, where this fever is virtually the same, modified no doubt by local circumstances.

CASE OF ICTUS SOLARIS.

During the unusual and excessive heats in the months of June, July, and August, we had frequent instances of men, exposed to the sun's rays, being suddenly attacked with severe headache, vertigo, and occasional irritability of stomach; which were generally removed in a day or two, by a saline purge and confinement within doors. But, on the 24th of August last, between three and four o'clock in the afternoon, when the atmosphere must have been heated to 120° of Fahrenheit, I was summoned to a field adjoining the barracks, to see a man, who was reported "to have dropped suddenly dead;" and, on hastening to the spot, I found one of our farriers, a fine, stout, plethoric, muscular man, about twenty-five years of age, extended where he fell, perfectly senseless and motionless; his limbs remaining in any position in which they were placed; his breathing, however, free and natural; his skin considerably above the temperature of health, although previously dashed with cold water, from the adjoining river, by his companions; his countenance flushed; the vessels of the eyes turgid, the pupils very much dilated, and a total want of contractile power in the iris; his pulse peculiarly full and firm, but not rapid; his jaws firmly closed, except on occasional irritability of stomach, when its contents were partially ejected, without any effort; and his fæces and urine had just passed involuntarily.

On inquiry, I soon ascertained that he had been drinking

beer, but not to excess ; that he had been leaping and running with his comrades in succession, for nearly two hours previously ; that he had no clothes on, except his shirt and drawers, and that his head, during the whole time, was uncovered, and exposed to the rays of this unusually hot sun ; and that, in the middle of his last race, when apparently winning it, he dropped suddenly, as if shot through the head.

Treatment.—With this information, and the general aspect of the case, I felt confident that nothing short of the most vigorous means afforded a prospect of saving his life ; the first object, therefore, after his immediate removal into hospital, was to diminish the quantity of circulating fluid, and thereby lessen the tone of the vessels in the system generally, and in the head particularly. To this end, large bleedings from the arm, temporal arteries, and jugular veins, were forthwith had recourse to ; saline glysters, refrigerants, cool air ; and a constant erect posture was maintained, to assist in taking off the force of the blood in the vessels of the head : this was evidently and materially assisted by a shower-bath every fourth hour. By a bold continuation of these measures, in which he lost in the commencement 112 ounces of blood, some slight improvement was apparent on the 30th, six days after admission ; when he first showed consciousness of surrounding objects, and a sense of tension was referred to the chest and head, by a movement of the right hand. But, at the same time, it was clearly discovered that hemiplegia, or perfect paralysis of the left side, had taken place, with the mouth considerably contorted to the right side, and the left eye totally insensible to the rays of light.

Blisters, drastic purgatives, friction, and electricity, in conjunction with the shower-bath, were now ordered, and continued with daily increasing advantage ; and, although he was long after subject to severe headaches, a peculiar affection of the eyelids, the mind not readily exercised, and the vital functions somewhat impaired, yet, by a steady and unceasing application of these means, the whole of the latter symptoms were entirely removed on the 2d of October following, thirty-nine days after admission, when he was permitted to return to his barracks, to attend to his business.

He has since resumed his duty in the forge ; and, although he still feels some deficiency of strength in the affected side when at hard work, yet it is now scarcely perceptible, either in walking or performing light duties ; so that the recovery is complete beyond my most sanguine expectations.

RHEUMATISMUS.

Dragoons are necessarily more subject to this class of disease, from the peculiarity of their duties, than any other description of soldier, being employed at least four hours every day in grooming and cleansing their horses, in a stable heated by excrementitious vapour and animal effluvia, fifteen or sixteen degrees higher than the circumambient atmosphere, to which they often, within this period, suddenly expose themselves (although contrary to order,) to draw water from the pump, frequently without their jackets, and always in a greater or lesser degree of perspiration; and, consequently, there are but very few of the old soldiers of the corps entirely exempt from this disease.

The greater part, however, of the individuals admitted under this head, when placed under treatment, were without any febrile or acute symptoms; complaining of erratic pains in almost every part of the body, but particularly severe in the large joints, without redness or swelling, and always augmented by warmth in bed; with evening exacerbations. Functions generally regular, and appetite always tolerably good; yet, after a short period of suffering, the bodily strength was diminished, the limbs and muscles wasted, and a peculiar haggard appearance of the countenance followed, always influenced more or less by change of weather; and distinctly separate from any connexion with either syphilis, scurvy, or the previous use or abuse of mercury.

Treatment.—In the very great variety of treatment heretofore tried in this tormenting disease, all external applications appeared to me invariably attended with but a momentary good effect,—removing, perhaps, the pain from the part affected to drive it to another. The internal use of colchicum, in increasing doses, had decidedly the preference over the whole of them. Acupuncture, as lately recommended by Churchill, has been tried nearly upon them all, and on some few with a transitory good effect. But, when there is no apparent phlogistic diathesis present, I have lately found that mercurial vapour, applied to the whole surface night and morning, until a slight action is perceptible, has an unequivocal advantage over every other remedy I have yet tried; giving tone and activity to the circulating system, requiring no muscular exertion in its use, being cleanly and safe in its application: and, whether the complaint lies in the muscular fibre, in the ligaments, or in the coats of the arteries themselves, I cannot hesitate in recommending this active diaphoretic and alterative as, at least, a powerful auxiliary.

METASTASIS OF GOUT, FROM THE EXTREMITIES TO THE
ABDOMINAL AND THORACIC VISCERA.

This disease, so unusually met with in military practice, was long a frequent companion of our late quarter-master, a man of robust and plethoric habit, a choleric-sanguine temperament, fond of good living, with a full florid complexion, and about fifty-two years of age. Having been long subject to attacks of it in a regular form, previous to my joining the Bays, I cannot, in consequence, enter fully into its previous history from personal observation; but it appeared from his own statement that he was, early in life, a martyr to severe attacks of rheumatism, both acute and chronic, which almost imperceptibly ran into regular gout about seven years since, suffering slight autumnal paroxysms, until the month of October, 1823, when a fit was repelled by some nostrum, which he was fond of resorting to, and was forthwith succeeded by acute pain in the præcordia; the stomach, so universally in consent with the rest of the system, becoming suddenly and violently affected; the lungs and heart participating; accompanied by a spasmodic affection in the epigastric region, severe vomiting, great anxiety, difficult respiration, palpitation, syncope, orthopnea, and laborious arterial action; which were ultimately mitigated, and with great difficulty subdued in six days, by copious blood-letting, warm baths, antispasmodics, blisters, opiates, musk, squills, and camphor.

But, although the high inflammatory action was at the time subdued, the effects of his imprudence continued to remain, without the slightest symptom of his former periodical gout ever after returning; and, in the autumn of 1824, twelve months after the attack above described, the following symptoms were noted in my private journal:—

A constant, dry, irritable cough, with a copious expectoration of a thick viscid phlegm; a sighing, suffocating respiration, rendering it necessary for him to be always erect to breathe freely. Loathing of food, and partial loss of appetite; without, however, any well-defined febrile symptom. Pulse full, but elastic and easily compressed, at ninety-two, with intermissions at every tenth or twelfth pulsation. Vertigo on any unusual exertion, violent palpitations, and increased dyspnoea on walking up stairs. A constant obtuse pain in the left breast, increased to acute by a recumbent position; and a frequent painful constriction across the whole chest, extending around each deltoid muscle. The external form of the thorax unaltered; but a general soreness prevails all over it, so as to render percussion inadmissible. The action of the heart visibly laborious, extending over a space of six or seven inches in

diameter ; and the whole arterial canal corresponding or vibrating with it, even to its remotest branches.

In this state he continued, with those symptoms at times considerably less aggravated ; influenced, he thought, by the state of the atmosphere, feeling better when the air was dry and elastic ; but always deriving temporary relief from antispasmodics, until the month of December following, when he first formed an idea that the exposed situation of Norwich barracks was detrimental to him, and that a change during the cold months might be productive of benefit.

Under this impression, he removed to Ipswich in January last, and placed himself under the medical care of a private practitioner of that place, who appears to have tried mercury to copious salivation, demulcents, and expectorants, without the least benefit. He therefore returned to head-quarters in April following, with a very visible alteration for the worse, in his symptoms and general appearance ; having become emaciated, appetite quite gone ; and, in addition to all his former sufferings, harassed by frequent severe headaches, and constant distressing incubus, which now became so much augmented as to compel him to remain constantly within doors : in which state he continued until the morning of the 20th of May, when, after shaving and dressing himself as usual, he complained of general tremors and unusual weakness, which compelled him to return to bed ; immediately after which he died, without the slightest convulsive struggle.

Dissection.—On the corpse being uncovered, forty hours after death, the external form of the chest appeared materially altered, with considerable emphysema, extending from the left axilla to the hypochondrium, with some ecchymosis ; and, on removing the integuments, the muscles of the trunk presented a soft, flabby, ash-coloured appearance : on being detached, they were readily mashed, or divided by simple pressure between the finger and thumb.

The ribs likewise were quite loose in their articulations with the vertebræ, offering little or no resistance to the saw, so that each rib required support to enable it to be cut through ; and, at length, on lifting the sternum, the lungs appeared unusually distended with blood and air, starting above the surface of the thorax, as far as firm and extensive adhesions of each to the pleura costalis and pericardium would admit ; and, on separating them from their connexions, and lifting them from their cavities, incisions into them were followed by the escape of a dark bloody mucus, intermixed with a thin purulent matter, and their substance, throughout their whole extent, studded with tubercles and concretions.

The pleura costalis, diaphragm, and præcardium, were preternaturally thick and emphysematous, and their internal sur-

faces throughout of a deep violet colour ; not giving the idea of recent inflammatory action by the presence of ramifying vessels, but of infiltration of long standing ; and in the cavity of the latter was found more than six ounces of bloody serum.

The heart itself was truly enormous, being double its natural size, and occupying a third of the whole cavity of the chest ; pale and flaccid as the external muscles, and surrounded by much gristly fat. The parietes of the right auricle and ventricle much softened or attenuated, the latter being in some parts nearly transparent ; the left not so thin, but equally soft and flaccid. The opening between the right auricle and ventricle unusually large. The valves distended, and the internal surface of each, with the membranes lining the cavities of the vena cava and pulmonary vessels, were universally of the same violet colour already described, but somewhat darker.

The aorta partook of the same dusky hue, and its arch was covered, for about three inches, with honey-combed or ulcerated spots, some of which had nearly penetrated its coats : hence the bloody infiltration into the pericardium already noticed.

The stomach unnaturally small, and thickened throughout its entire substance. The villous coat of a dark chocolate colour ; and the longitudinal plaits, or rugæ, near the pylorus considerably raised or thickened, with the interstices filled with a caseous matter, resembling indurated or coagulated lymph.

The head was not examined ; but the remaining viscera, were free from morbid appearances.

ART. IV.—*Two Cases of Dropsy, in which unusually large Doses of Digitalis were administered.* By JOHN DAVY, M.D. F.R.S. &c.*

ASCITES.

CORNELIUS WOOD, first Veteran Company, aged thirty-seven ; admitted 27th January, 1823. An Englishman ; no trade ; eighteen years in the service. Has never used mercury. Has served in the Mediterranean, in the Peninsula, in France, and in Canada. In 1814, while with his corps in Portugal, had an attack of fever, attended with mental alienation ; for which he remained in hospital four months. He has also, for the last three months, been occasionally affected with tertian intermittent, and latterly with symptoms of pneumonia ; for which he has been bled and blistered. Has used some sulphate of zinc pills for the ague.

* In a former Number, we briefly alluded to the occurrence of these cases : we now present two of them to our readers, extracted from the records at Chatham.—EDITORS.

He is now admitted with an anasarcaous affection of the head, face, and lower extremities, and hydropic tumefaction of the abdomen. Bowels costive; cough, and expectoration; tongue white; skin pits.—R. Pulv. jalap. comp. $\mathfrak{z}\text{j}$.

28th.—The powder operated briskly. There appears to be some tendency in the swelling to subside. *Pulse full*.—Vene-
sectio ad $\mathfrak{z}\text{xij}$.

R. Extract. conii, gr. xij.
Pulv. digitalis, gr. x.
Sodæ subcarbon. $\mathfrak{z}\text{ss}$.
Infus. gentian, $\mathfrak{z}\text{iv}$. M. fiat mistur. quotidie
sumend.

January 31.—A portion of his urine voided yesterday was examined. It contained a large proportion of mucus, and deposited much red sediment. It coagulated slightly, from the effect of heat and of nitric acid.

R. Spirit. ætheris nitric, ss.
Vin. opii, gtt. xx.
Decoct. cinchonæ, $\mathfrak{z}\text{j}$.
Tinct. rhæi, $\mathfrak{z}\text{ss}$. M. fiat haust. statim sumend.

R. Extract. conii, gr. xij.
Pulv. digit. gr. xv.
Pil. hydrarg. gr. v.
Syrup. zingib. q. s. M. divid. in pil. vj.

Capiat ij. omni nocte.

February 2.—Continues much the same. Has had no stool since last report.

R. Sulph. magnes. $\mathfrak{z}\text{j}$.
Antimon. tartarisat. gr. j.
Vin. alces, $\mathfrak{z}\text{j}$.
Infus. sennæ, $\mathfrak{z}\text{ij}$, M. Capiat $\mathfrak{z}\text{j}$. quaq. hora
donec, &c.—Cont. mistura et pilulæ; omitt. haustus.

3d.—Vomited part of his mixture yesterday, but had afterwards several loose stools.—Cont. mistura sed augeatur. Pulv. digitalis ad gr. xv. in die.

4th. Had a severe attack of fever and ague yesterday. Has voided about three pounds of urine the last twenty-four hours.

R. Decoct. cinchonæ,
Infus. gentian, $\mathfrak{z}\text{ij}$.
Tinct. sennæ, $\mathfrak{z}\text{ij}$. M. Capiat quotidie; et
cont. mistura digit.

R. Supertart. potassæ, $\mathfrak{z}\text{ss}$. Divid. in chart. iv.
sumat j. 3tia. quaque hora.

5th.—Complains to-day of difficulty of breathing and cough. Less urine; bowels loose. Rested ill.—Cont. medicam.

6th.—Says he is at present threatened with an attack of ague. Bowels loose; urine more copious. *Pulse sixty*.—Cont. med.

R. Spirit. æther. nitr. ʒj.
 Æther. sulphur. ʒj.
 Vin. alces, ʒj.
 Aquæ menth. piper. ʒj. M. fiat haust. statim

sumend.

9th.—Ague and fever very slight.—Cont. medicam.

11th.—Complains of nausea, and has a good deal of ptyalism.
 —Cont. sed aug. pulv. digit. ad gr. xx. Omit. pil. c. hydrarg.

14th.—Feels rather better. His mouth is still sore.

R. Extract. conii, gr. xij.

Pulv. digit. gr. xxv.

Extract. taraxaci, ʒj. Fiat mass. et divid. in
 bolos No. viij. Capiat j. quaque hora.

17th.—Bowels rather confined. Says he has caught fresh
 cold. Some dyspnœa. Salivation diminished. Urine of a
 bright red colour, from purpuration of ammonia. *Pulse rather
 full.* He feels better in every respect.—Cont. med. Capiat
 pulv. rhæi ʒj. in infus. sennæ ʒij.

21st.—Progressively improves; appetite pretty good; bowels
 regular. *Pulse soft.*—Cont. mistura et pilulæ ut antea.

22d.—Urine still high coloured; respiration more easy;
 bowels confined. *Pulse sixty-four, and rather full.*

R. Pulv. rhæi, gr. xij.

Sodæ sulph. ʒij.

Infus. sennæ, ʒj. M.

23d.—Had three alvine evacuations since yesterday; urine
 continues high coloured. *Pulse soft*; tongue and skin moist;
 appetite good. Threw up a little coagulated blood yesterday,
 while coughing.—Venesection to ten ounces. Cont. med.;
 aug. pulv. digit. ad gr. xxx.

24th.—Feels better. *Pulse seventy-two, and soft*; bowels re-
 gular; blood taken buffed; urine not so high coloured; tongue
 moist; appetite good. Sleeps pretty well.—Cont. med.; et
 add gr. v. pulv. digit. ad misturam.

26th.—Bowels rather confined; in other respects better.

R. Sodæ sulph. ʒij.

Infus. gentian, ʒjss.

Aquæ fontanæ, ʒjss. M.

29th.—Urine of nearly a natural colour; bowels quite regu-
 lar; *pulse soft and natural*; tongue and skin moist; appetite
 good. When he lies on his left side, he is seized with a trou-
 blesome cough, but has no pain.—Cont. med.; aug. digit. ad
 gr. x.*

* This addition appears to have made the quantity of digitalis administered in
 twenty-four hours equal to *seventy grains*; viz. 45 in the mixture, and 25 in the form
 of pill or bolus.—See Dr. DAVY's paper in our Number for June 1824, in which he
 states that he has given to the extent of 105 grains in twenty-four hours: the same
 digitalis, when given to other patients, producing its usual effects.—EDITORS.

March 2d.—Progressively improves. Bowels regular; appetite good; sleeps well.—Cont. med. ut antea.

4th.—Urine of nearly a natural colour; bowels regular; appetite good. Swelling quite gone.—Cont. med.

7th.—Daily improves. Bowels regular; appetite good.—Cont. med.

10th.—Progressively gains strength; look improved. Bowels regular; appetite good.

11th.—Convalescent.—Omit. med.

12th.—Discharged.

ANASARCA.

June 11th, 1823.—Samuel Totton, 9th Lancers, aged thirty-four, admitted last night, having arrived from Weymouth two days ago; an invalid. He is a native of Lancashire, a hatter by trade; has been seventeen years in the 9th Light Dragoons. He served at Walcheren, in Portugal, Spain, and in France. Had fever at Walcheren, and has been subject to relapses occasionally ever since. He never had venereal disease. Patient strong made, and apparently of full habit. Says he fractured his knee eight months ago, while employed in the revenue service on the coast of Dorsetshire, near Bridport, by falling into the rift of a cliff; and, in consequence of this injury, has been ever since in hospital. On examination of his right knee, it appeared as if the inner condyle of the femur had been fractured, or otherwise injured. He has not the power of properly either bending or extending the leg, and complains of constant pain in the joint. About three months ago, the anasarca symptoms made their appearance. He caught cold by pumping on his knee: an attack of ague was the consequence; and afterwards the dropsical affection followed. When he left Weymouth, on the 28th ult., he was but little swollen; but it has considerably increased since he commenced the march. Legs and thighs now much swoln and œdematous; face swoln. On examining the abdomen, fluctuation is distinctly felt. Pulse full, ninety-two; breathing short and difficult; pain across the chest; bowels irregular, now open; skin moist; sleeps badly; slight hard cough.—Habeat solut. potass. super-tart. pro potu comm. Venesection ad $\bar{3}$ xij.

June 12th.—Patient's breathing relieved by the bleeding; coughs less; feels generally better; blood scarcely buffed; much serum; urine scanty.

13th.—Pulse ninety, soft and full; bowels open; skin moist, temperature natural; swelling of the extremities subsided; slept badly. Feels better; urine more copious.

R. Pulv. digitalis, gr. xv.

Potassæ supertart. 3ss.

———— tartrat. 3iv.

Syrup simp. 3ij.

Aquæ hordei, 3xiv. M. Capiat in dies.

June 14th.—Frequent stools during the night. Skin soft and moist; *pulse soft, ninety-six*. Complains of tightness across the chest.—Repet. mistura digitalis, &c. Omit. solut. potassæ supertart.

15th.—Says he feels better. Three stools only yesterday, *Pulse ninety, with some resistance*; skin moist, temperature equable; appetite improving.

16th.—Says he is better; looks improved. Two stools yesterday. *Pulse eighty, slightly resisting*; skin soft and moist; temperature equable; appetite good. Tightness across the chest continues. The mixture nauseates. Urine copious and free.—Mittatur sang. per scarificat. thorac. ad 3iv.

R. Pulv. digitalis, gr. xv.

Potassæ tartrat. 3ij.

———— supertart. 3ss.

Sodæ carbon. 3ij.

Syrup simp. 3ij.

Decoct. hordei, 3xiv. Capiat in dies.

17th.—Was relieved by the cupping on the chest. Breathing now more free. Two stools yesterday. No nausea; urine copious; *pulse seventy-five, soft and full*; skin soft and moist, temperature slightly raised; tongue furred; appetite tolerable.

18th.—Patient's state much as yesterday. *Pulse quicker, more full, and resisting*. Sleeps badly.

19th.—Patient had an exacerbation of fever last evening, when his *pulse was ninety-six, and resisting*; temperature raised, skin inclining to dryness; tongue loaded; anxiety and uneasiness; sleep disturbed. Now apyrexial; *pulse seventy-six, weak, and contracted*. Frequent ineffectual stools during the night; skin and temperature natural; anxious and uneasy; tongue furred, moist; urine free.

R. Ol. ricini, 3v.

Extract. opii, gr. ss.

Aquæ menth. piper. 3j. M. Stat. sumend.

20th.—No considerable exacerbation last evening. The oil opened the bowels; rested badly; frequent startings. Complains now of great pain in the right lumbar region, extending towards the regio umbilicalis. Pain increased by pressure. *Pulse seventy-two*; tongue loaded; slight thirst; no appetite.—Mittatur sang. per scarificat. part. affect.

21st. The cupping relieved the pain. Passed a tolerable night, and feels better. Tongue furred; *pulse seventy-six, with*

a jerk; thirst; temperature rather above; skin moist. No stool since the operation of the oil; urine free. There is a fluctuation within the abdomen; but the extremities are reduced to their natural size.

R. Pulv. rhæi,
Magnesiæ carbon. āā ʒj.
Aquæ menth. pip. ʒjss. M. fiat haustus stat.

sumend.

22d.—Says he is rather better. Bowels evacuated. *Pulse eighty, full and hard*; skin rather dry; temperature above the natural standard; tongue loaded; sleep disturbed; slight thirst; appetite bad; urine free and copious, dark brown colour, with much sediment: it is serous, and coagulates with the application of heat or nitrous acid.—Venesection ad ʒxij.

23d.—Blood buffed, and slightly cupped; bowels open. Says he feels better. Sleep less disturbed; skin soft, temperature natural, *pulse eighty, less resisting*; urine copious. Appetite continues to improve.

R. Liq. ammon. acet. ʒij.
Decoct. hordei, ʒviij. M. Capiat in dies.

Omitt. mistura cum pulv. digitalis.

24th.—Says he is still better. Had a keen appetite this morning. *Pulse eighty-four, soft and regular*; skin moist; bowels open thrice yesterday; urine copious and free; tongue nearly clean.

R. Potassæ supertart. ʒss.
Pulv. zingib. ʒss. M. divide in pulv. no. iij.

Capiat unam ter quaterve in dies.

25th.—Patient easy, and feels better. Tongue moist, and nearly clean; pulse eighty-four, soft and regular; skin soft; bowels regular; urine copious, high coloured.—Repet. mistur. et pulv. potassæ supertart.

26th.—Four loose stools yesterday, and two during the night. Pulse eighty, slightly resisting; tongue moist and clean; skin soft and moist; urine free; appetite improving.

27th.—Slight pyrexia. Pulse eighty-two, compressible; temperature natural, skin soft; tongue nearly clean; bowels loose; urine free, colour natural. Says he feels better.

29th.—Slight pyrexia. Pulse eighty-four; tongue foul; skin soft, temperature raised; bowels open; urine free. Complains of acute pain in the left ear.—Applic. hirudines no. iv. post aurem.

30th.—Slight pyrexia. Skin soft, temperature slightly raised; pulse eighty-four, resisting; bowels open; urine free; ear relieved. Some œdema of the face and hands.—Cont. in usu misturæ et pulv. potassæ supertart. ut antea.

R. Pulv. cinchonæ ʒss. divide in pulv. iv. Capiat in dies.

July 5th.—The œdema and swelling have disappeared from every part. Apyrexia. Pulse eighty-six, soft; temperature natural; tongue clean; bowels open; urine free; health and appetite improving.—Repet. pulv. supertart. potassæ ut antea. Repet. pulv. cinchonæ et mistura ut antea.

9th.—Patient gradually improves; strength daily increasing; appetite good. Makes no complaint.—Repet. omnia.

12th.—He is now better than he has been for many months, and continues to improve. Makes no complaint. No appearance of œdema or swelling of the abdomen. Pulse eighty, regular; temperature natural, skin soft; bowels open; appetite good. Gains strength daily.

R. Pulv. cinchonæ, 3ij.

Potassæ supertart. 3iij.

Pulv. zingiber. 3ss. M. divide in chart iij.

Capiat in dies.

19th.—He has continued to improve in health since last report. He is now free from complaint. Discharged, to appear before a Chelsea Board.

COLLECTANEA MEDICA:

CONSISTING OF

ANECDOTES, FACTS, EXTRACTS, ILLUSTRATIONS, &c.

*Relating to the History or the Art of Medicine, and the
Collateral Sciences.*

Floriferus, ut apes, in saltibus omnia libant,
Omnia nos, itilem, depascimur aurea dicta.

ART. I.—*Extracts from "A Treatise on the Diseases of the Eye; including the Doctrines and Practice of the most eminent Modern Surgeons, and particularly those of Professor BEER. By GEORGE FRICK, M.D. Ophthalmic Surgeon to the Baltimore General Dispensary. A new Edition, with Notes, by RICHARD WELBANK, Member of the Royal College of Surgeons, and of the Medical and Chirurgical Society of London."*—Anderson, London, 1826.

PART I. CHAP. III.—*Rheumatic Ophthalmia, (Ophthalmia Rheumatica. Sclerotitis.)*

SOME authors, and among the rest Professor Walther, have termed this species of ophthalmia the *arthritica*. The epithet *rheumatica*, given it by Beer, is perhaps the most appropriate; not only because the texture in which it is seated is analogous to that in which rheumatism is commonly found to have its seat, viz. the ligamentous and fibrous parts of the body, but because it is most generally known to alternate with, or succeed to, rheumatic affections in other parts of the system, and is

most prevalent in those seasons of the year when rheumatism is most frequent.

The disease generally commences with a deep, lancinating, or acute pain of the orbit, now and then confined to the eyebrow, but most commonly extending over the whole of the side of the head which is affected.* This pain is rendered worse at night, when the patient is covered warmly in bed; and very often one or more of the joints are affected at the same time. Sometimes general rheumatism, or pains in the limbs, have preceded the inflammation in the eye, which are mitigated, or cease entirely, as soon as the disease is once firmly established in the latter organ. With the first sensation of pain in the eye, there will be found more or less redness of the sclerotica, epiphora, and intolerance of light. The redness is to be distinguished from that which takes place when the conjunctiva is the seat of inflammation, from its being of a lively carmine or rose colour, from its being diffused over the whole sclerotica, and from its being more deeply situated.† There is a constant weeping of the eye, more particularly when it is subjected to sudden vicissitudes of temperature, or exposed to a damp and cold atmosphere. Hence this variety of ophthalmia has been termed by the older nosologists, the *ophthalmia humida*.

These symptoms, if not controlled by art, are every day increased. The redness of the eye becomes greater, extending itself to the vessels of the conjunctiva, which may be seen of a florid red colour, and covering the more delicate rose-like capillaries of the sclerotica. The pain is rendered more severe, affecting not only the cranium, but the whole head and face.‡

The cornea, or rather the conjunctiva covering this tunic, participates in the inflammation. It is observed to lose its transparency, and assume a dull horny appearance. Small vesicles, or phlyctenulæ, form on various parts of this membrane; which bursting, pour forth their contents, and leave behind as many superficial ulcers, which seldom or never, however, extend deep into the cornea. If the constitution be otherwise healthy, they most commonly disappear with the other symptoms of redness, pain, &c. leaving in general little or no opacity, or any further trace of their having once existed, than some slight and almost imperceptible excavations or foveæ of the cornea; which, however, disappear altogether in the course of a very little time.

When the disease is permitted to run its course, the inflammation spreads to the iris,—the vessels of the sclerotica are seen to take on the beautiful rose-coloured zone peculiar to iritis, the iris loses its irritabi-

* In many of these cases, before the inflammatory action is established, I have derived the most gratifying advantage from the exhibition of ʒss. of muriate of ammonia, or ʒij. of the subcarbonate of iron, every four hours, in a glass of water.—EDITOR.

† There is no pale line of interval between the edge of the cornea and the zone of sclerotic vessels, where the scleritis is acute.—ED.

‡ Perhaps some forms of remittent ophthalmia are attached to the class now under consideration. An interesting practical case, attended with intense suffering, and relieved by large doses of opium, is related by Dr. Curry, who was himself the subject of it, in the Medical and Chirurgical Transactions, vol. iii. p. 348.—EDITOR.

lity and becomes sluggish; its colour is changed to a greenish hue. The pupil is irregular, angular, and contracted. There is effusion of coagulable lymph in the pupil, which considerably impairs the patient's vision; and small brownish condylomata are seen to arise at the same time upon the iris.

Sometimes the inflammation, instead of attacking the anterior hemisphere of the eye, is propagated to the more interior tunics, the choroid, retina, and hyaloid membranes. If the eye be now examined, a dark greenish opacity, of a concave appearance, will be distinctly observable deep within the pupil, becoming daily more apparent, until it extends quite to the pupil. The vision is more or less impaired, or even entirely destroyed. If the disease be not arrested at this period, the vitreous humour enlarges, so that the volumen of the eye is considerably increased; and we have superadded to the opacity of the vitreous humour, or *glaucoma*, *hydropthalmia*.

The causes which produce inflammation of the sclerotica are, in general, the same as those which excite inflammation in other organs of the body. Most commonly the disease may be traced to sudden exposure to cold, after the body has been preternaturally heated. It is often preceded by pains in the limbs, or some general rheumatic affection; more frequently the pain and redness of the eye are the first symptoms of the disease, or it is ushered in by chill and fever. The disease generally makes its attack in one eye only, and the other is not affected until the inflammation has made some progress, or entirely exhausted itself in the first. At other times both eyes are attacked simultaneously, and the disease advances equally in both.

Cure.—When the disease is violent, accompanied with a tense and hard pulse, it will be necessary, in the first stage, to have recourse to venesection. This may be aided by cupping, or leeches applied to the temples. The division or opening of the temporal artery, as uniting the advantages of local with general depletion, has been highly recommended in this species of ophthalmia; but is now very generally abandoned, as it is constantly followed by an aggravation of the disease. Dr. Vetch has very satisfactorily accounted for this, in the power which arteries possess of rapidly accommodating themselves to the exigency of the part which they supply.

As this ophthalmia is, in general, accompanied with some affection of the stomach or alimentary canal, it is advisable, in most cases, to follow the bleeding by an emetic, or to empty the bowels by some active cathartic. To these should succeed the employment of antimonials, given in small quantities, so as to keep up a constant nausea, and determine towards the skin. They are more especially advantageous where the disease has originated from exposure to cold, or where the functions of the skin have been suddenly suppressed.*

* Mr. Brodie suggests the use of colchicum, as advantageous in the cases which attend, or succeed to, puriform inflammation of the urethra, with rheumatism of the joints. Sometimes the state of constitution is brought on by drinking light wines, cider, or hard beer. The presence of acidity in the stomach is always worthy attention in gouty and rheumatic subjects. Decoction of sarsaparilla in lime-water is a valuable medicine in some of these cases.—EDITOR.

Mr. Wardrop has used, with considerable advantage, small doses of bark in rheumatic ophthalmia, and considers it to possess as specific an effect in this disease as in ague. The practice, from the greater violence of inflammatory affections in this country, is scarcely admissible.

The pain in this disease is best alleviated by blisters applied behind the ears, or to the nape of the neck; warm fomentations of poppy-heads, hyosciamus, &c. contribute to the same effect. Where the pain is extremely violent, and accompanied with a sensation of tension or constriction of the globe, relief is frequently obtained by evacuating the aqueous humour, in the manner proposed by Mr. Wardrop.

Unctuous or fluid applications to the eye are seldom of much benefit, excepting in the latter state of the inflammation. The most useful of these are the vinous tincture of opium, or Sydenham's tincture, streaked once or twice daily, by means of a delicate camel-hair pencil, into the eye.

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PART II. CHAP. III.—*Of the Diseases of the Iris.*

Mydriasis.—This name is applied to the extraordinary and permanent dilatation of the pupil. The transient dilatation which is caused when the eye is withdrawn from a lighter into a darker region, is dependent upon the peculiar organisation of the iris, and cannot, therefore, fall under our consideration at present.

This affection most commonly attacks both eyes at the same time: often, however, the pupil of one eye only is dilated, whilst the other preserves its natural size. The form of the pupil is commonly the same as in the healthy state; at other times it is oval, elongated, or angular.

Mydriasis may be congenital or acquired, symptomatic or idiopathic. That species of mydriasis which is congenital, and consequently incurable, is most commonly symptomatic, depending upon a want of sensibility in the optic nerve, or its expansion into the retina. These cases generally terminate in complete gutta serena.

Long confinement in a dark room may render habitual that dilatation of the pupil, which the eye naturally suffers on being deprived of its proper stimulus, light. It would appear that, like all other organs of the body, the iris, from want of proper exercise, loses its power of action. Persons who have passed a number of years in dark dungeons and gloomy cells, afford remarkable instances of the influence of habit on the motions of the iris.

Mydriasis is often a symptom only of some other disease, as amaurosis, worms in the intestines, organic affections of the brain, as apoplexy, hysteria, epilepsy, hydrocephalus, &c. The pupil is always found dilated during sleep, as well as after death. Persons affected with hydrophthalmia have the pupil much dilated, in consequence of the great development of the vitreous humour. Hence, too, we find mydriasis often a symptom of cataract, more especially of the soft or milky kind, where the lens is much enlarged.

Idiopathic cases of mydriasis are much more rare than the sympathetic. They are most commonly induced by blows upon the eye injuring the frontal eye; an effect which may probably be accounted for, from

the connexion of the frontal branch of the fifth pair of nerves with those supplying the iris. Sometimes they are caused by the too sudden and forcible expulsion of the crystalline, in the extraction of cataract. The iris, being compressed or extended by the passage of this body through it, causes a relaxation or palsy of its tissue. Injury or violence done to the ciliary nerves and body, may cause a similar palsy of this membrane, and consequent dilatation of the pupil.

The diagnosis in mydriasis is readily made out. It is necessary merely to distinguish the symptomatic from the idiopathic species. In the former, our attention should be directed to the disease of which this dilatation is but the symptom; and, by relieving the one, we cure the other. In the idiopathic species, warm, stimulating, aromatic, and spirituous substances have been successively tried; as also scarifications, leeches, blisters, setons in the neck, purgatives, emetics, &c. In some instances these remedies have succeeded; in general, however, they have proved fruitless, more particularly where the disease has been congenital.

The pupil is also liable to excessive contraction, a disease known under the name of *Myosis*, (*Phthisis Pupillæ*.) It is in some cases even completely obliterated, when it is termed *Synizesis*. These two diseases differ merely in degree, both being ascribable to the same causes.

Myosis may be symptomatic or idiopathic. The former is the case where, from an undue degree of sensibility in the retina, caused by, or subsequent to, inflammation of the eye, the pupil is found extraordinarily contracted. Nature, in this manner, provides against the injurious effects which might otherwise result from the continual irritation of so delicate a membrane. Inflammation of the brain is a common cause of *myosis*.

The most frequent of all the causes of this contraction of the pupil, is a violent ophthalmia, spreading to the iris; or it may be the effect of iritis itself. Hence it is a common sequela of the operation for cataract.

Myosis is often the consequence of wounds of the iris, or of the detachment of this membrane from the ciliary ligament, by violent contusion of the eye.

Myosis often comes on without any previous inflammation, and without any apparent affection of the eye. Gouty persons, and particularly such as have suffered the operation for cataract, are most subject to the disease; and it may appear a week, months, or even years, after the operation, without any evident cause, or any previous pain or inflammation of the organ.

Persons compelled by their profession to fix their eyes continually upon minute or glaring objects, are liable to have the pupil very contracted,—as watchmakers, silversmiths, miniature painters, engravers, &c. This arises *ex consuetudine*. The pupil, to guard the retina from the injurious consequences of the too vivid light, contracts; and this contraction, produced at first from habit, becomes at length so firmly established, that it is impossible afterwards to dilate the pupil.

There is yet a species of *myosis* which may be termed the *myosis spuria*, where the pupil is closed by some extraneous matter. This may

be a clot of blood from extravasation in either of the chambers, pus filling up these cavities, or some part of the lens left behind after the extraction of cataract. This extraneous matter is frequently the coagulable lymph which is thrown out from the iris, under a state of inflammation. I have seen the whole pupil filled with such a mass of lymph, so that the vision was completely destroyed; yet the whole was absorbed again in a few days, under proper treatment.

Synechia.—The iris is sometimes found united to the cornea, at other times to the capsule of the lens; and this has given origin to the terms *synechia anterior* and *posterior*. The former may be congenital; but it is most generally the consequence of wounds penetrating the cornea, abscesses forming between the coats of this membrane, producing fistulous openings, or operations upon the eye. The adhesion formed in this way is seldom general, but exists only at the part wounded, or at the inferior portion of the cornea, where abscesses are most liable to be seated. It is very readily recognized; the united portion of the iris, and corresponding portion of the pupil, being commonly more prominent and immoveable, whilst the rest of the iris and pupil maintain their natural form and mobility. The deformity of the pupil is in proportion as the adhesion is formed nearer the circumference of the cornea, or to the degree of dilatation at the time of its formation.

Synechia posterior may succeed to the same causes, but is most commonly the effect of deep-seated inflammation of the eye, or of iritis. The adhesion in these cases is most generally total between the iris and capsule; and the pupil, though immoveable, maintains its natural figure and situation. Where the adhesion is only partial, the pupil is more or less angular and distorted.

In the first case, the disease is always incurable. Where it is partial only, and the uniting medium consists of a small portion of coagulating lymph, much benefit will be derived from the use of the belladonna or hyosciamus, in the manner advised when speaking of iritis, aided by the internal administration of small doses of mercury. The same means may prove effectual even after this lymph has become organised.

To prevent this adhesion in cases of wounds of the eye, it has been advised to expose this organ to alternate changes of light and darkness, so as to cause the iris to dilate and contract, and thus oppose its union with the contiguous membranes. Such a practice, however, must always prove prejudicial, as it never fails to increase the inflammation which inevitably follows any violence inflicted upon so delicate and susceptible an organ.

Prolapsus of the Iris, (Prolapsus Iridis.)—This affection is also termed *staphyloma iridis*, and consists of a tumor, formed by the iris, protruding through an unnatural opening of the cornea. The tumor which results from this protrusion is necessarily of the colour of the iris. Its size varies from that of a pin's head to a small pea; and hence the different names of *myocephalon*, *melon*, *hylon*, &c. The form is, in general, irregular; its surface is rarely smooth, as in staphyloma of the cornea, but more commonly unequal or angular; the tumor is soft, and, when recent, easily reducible. As the cornea is seldom pierced in more than one spot, the prolapsus is most usually single; where this

membrane is wounded in several places, the staphyloma may be multiple.

The patient complains of a pain, similar to that produced by a pin thrust into the eye, or of a sensation of tightness or constriction of the eyeball, like to that caused by a ligature around the organ. The pupil is always distorted, and drawn from its natural situation towards the aperture where the protrusion takes place; it loses its circular, and assumes an oval or oblong, form. Hence the distinctness, as well as the sphere of vision, is considerably impaired. To these symptoms are often superadded an habitual epiphora and inflammation, rendering the light excessively painful. By degrees the tumor hardens and becomes indolent, or gradually disappears; so that, after a certain time, nothing more is perceptible than a small blackish point in the midst of the cicatrix. The pupil, however, remains in the state before described.

The diagnosis in this disease is easily made out: the appearance of a tumor after a wound or ulceration of the cornea, and a deformity of the pupil, are its pathognomonic signs.

Some surgeons have advised the prolapsed iris to be returned into its natural situation, by means of an ivory stylet, or the common curette. This, however, is in general impracticable. Where the prolapsed part is large, it should be snipped off with a pair of scissors; after which the wound may be slightly touched with the caustic pencil. In this manner the adhesive action is soon set up, and an union takes place between the iris and cornea. Where the prolapsus is of long standing, and does not yield to the caustic, it may be removed with the cornea knife or scissors.

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PART III. CHAP. I.—*Of the Diseases of the Eyelids.*

Inflammation of the eyelids, like inflammation of the eyeball, has been subdivided by the German pathologists into several varieties, according as the disease is confined to one or other of the tissues which make up their structure, or is dependent upon general taint of the constitution. I shall notice the most important of these only.

Of pure Inflammation of the Eyelids, (Blepharophthalmitis Idiopathica.)—This disease most frequently originates in the upper eyelid, spreading thence to the lower, or extending itself backward upon the conjunctiva. It commences with a red, tense, and painful swelling of the borders, which gradually extends over the whole of the eyelid, and is attended with great heat and throbbing. The motions of the eyelid are much impaired, or entirely destroyed. The inflammation spreading to the lachrymal and meibomian glands, their secretions are suspended; the eyeball, in consequence, is rendered dry; and every attempt of the patient to move the lid causes excessive pain, or a sensation not unlike that produced by foreign bodies lodged beneath them. The nostril of the affected side, from the same cause, and from the shrivelled state or entire closure of the lachrymal puncta, being deprived of its natural moisture, obliges the patient to sneeze from the least irritation; and always accompanied with a considerable aggravation of the pain in the

swelling, darting backwards into the orbit or head. This stage of the disease is generally attended with some degree of febrile disturbance.

If the inflammation be not soon dispersed, suppuration takes place. The redness now increases, becoming of a dark or purple hue; the swelling is more prominent, or assumes a conical shape; the pain is irregular, and of a burning or pulsatory kind. The tumor at length becomes softer in its centre, and is less sensible to the touch than before. The natural secretions from the lids are again restored, or poured forth more copiously than in health, so that the lids are firmly agglutinated during sleep. An uncommon feeling of cold and heaviness is experienced about the eye; and a fluctuation is now distinctly perceptible in the swelling, sufficiently characteristic of the presence of matter.

Where the disease occurs in sound constitutions, and is properly treated from the commencement, it may in most instances be resolved. If, on the other hand, the inflammation arises in a weakened constitution, or is injudiciously treated by the surgeon, it rapidly runs into the suppurative stage, or advances to gangrene. The mischief in such cases is not confined to the outer integuments alone, but the mortification may extend to the orbicularis muscle, and, when severe, attack the organ itself.

From the quantity of cellular substance contained in the eyelids, the abscess which forms after inflammation, is, in general, very extensive: hence the unpleasant train of evils which frequently results from suppuration of these parts. Among these may be accounted, 1st, a contraction or complete adhesion of the lachrymal canals, causing a permanent stillicidium; 2d, a prolapsus of the upper eyelid; 3d, inversion or eversion of the upper eyelid, and lagophthalmos from loss of substance; 4th, fistulous sinuses and caries about the bones of the orbit.

The cure of this disease, in its first stage, is easily accomplished by the use of cold and astringent lotions, together with leeches. The latter should never be applied directly to the eyelid, as they are apt to increase the swelling and congestion of the part. Much benefit, however, may be derived from their application behind the ears. Where there is much constitutional disturbance, general bleeding, with purgatives, should be premised, and the strictest antiphlogistic regimen enjoined upon the patient.

As soon as the disease shows any disposition to suppuration, or the swelling assumes the conical form already described, all thoughts of dissipating the tumor should be given up, and the suppuration assisted by mild emollient cataplasms. If the abscess be seated in the middle of the upper eyelid, it may, in general, be left to burst spontaneously; if near the canthi, or in the under eyelid, the matter should be let out with the lancet, as soon as the fluctuation is perceptible, and healed like the common abscess. When fistulous sinuses form about the part, or gangrene ensues, they should be treated by counter-openings, bark, and all such remedies as are usually employed for similar affections in other parts of the integuments.

Erysipelatous Inflammation of the internal Canthus, (Anchylops Erysipelatosa Idiopathica.)—This disease, which is frequently con-

founded with inflammation of the sac itself, possesses all the characteristic symptoms of erysipelas in other parts of the body. As long as the lachrymal sac continues unaffected, the swelling of the parts is equally diffused, and no particular hardness is discoverable in any portion of the tumor. More commonly, however, the inflammation extends to this organ and its ducts; and a hard, circumscribed, and very painful tumor is then distinctly felt just below the tendon of the orbicularis muscle. In some cases it possesses a darker or redder colour than the adjacent parts. The puncta are completely closed, so that there is a constant stillicidium of the tears over the cheeks: the nostril upon the side affected is, in consequence, rendered dry, and uncommonly sensible to the slightest irritations.

These appearances gradually subside, and give place to a new train of symptoms, or to the second stage of the complaint. The papillæ and ducts, if they have not suffered severely in the first stage, again resume their office, and the tears are absorbed and transmitted, as usual, to the sac; the edges of the eyelids and lachrymal caruncle secrete a tough viscid mucus, so that the lids, during sleep, are firmly agglutinated. The lachrymal sac, if the inflammation has been severe, becomes filled with mucus, which is easily pressed out through the lachrymal ducts and puncta. An abscess now forms beneath the integuments, which opens either externally, or penetrates the fibres of the orbicularis muscle, and the anterior walls of the lachrymal sac. This latter circumstance is easily distinguished, not only by the mucus which is discharged in these cases with the matter, but from a quantity of tears which issue at the same time, unmixed indeed, with the rest of the contents. It is somewhat more difficult to distinguish the disease, before the abscess has burst, from mucocœle, or a collection of mucus within the lachrymal sac; but, by a little attention to the history and progress of the symptoms, the diagnosis is easily made out. In the former, or abscess of the cellular substance, the tumor in its commencement is hard and elastic, and the fluctuation only evident at the decline of the disease: in mucocœle, on the contrary, the fluctuation, if there be any present, is only perceptible at the commencement, the tumor becoming constantly firmer and more unyielding as the complaint advances.

The prognosis in this disease is generally favourable, more especially when the lachrymal sac continues free from inflammation; and the only ill consequence resulting is a slight degree of stillicidium lachrymarum, which gradually disappears. The result, however, is less fortunate where the inflammation has attacked and destroyed the anterior walls of the sac, as a very obstinate and long-continued blennorrhœa of the sac succeeds.

The treatment in the first stage of this complaint does not differ from that pursued in the erysipelatous inflammation of other parts of the body; and all that is necessary will be to foment the lids occasionally with cold water, to open the bowels by any mild laxative, and to administer afterwards small doses of the tartarised antimony. Unless the inflammation be very severe or extensive, it is seldom necessary to resort to general bleeding. Where suppuration is about to form, the cold

applications are to be exchanged for warm poultices of bread and milk, and the abscess, when fully formed, should never be permitted to open spontaneously, lest the sac become involved in the affection; but, as soon as the slightest fluctuation is perceptible, we are to proceed to open the sac with the common lancet or bistouri. Should the abscess have burst before the surgeon is called to see the patient, he should avoid the introduction of all probes and syringes into the sac, as is too commonly practised, and content himself with washing out the abscess daily with a little tepid water, thrown in by means of a small syringe. The wound is afterwards to be dressed with a small tent of charpie, moistened with the vinous tincture of opium, care being taken not to push it so deep into the wound as to enter the lachrymal sac.

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Triachiasis, (Inversion of the Eyelid.) Distichiasis, (Double row of Eyelashes.)—Trichiasis appears in one of two forms; either the cilia are turned inwards upon the eye, without any incurvation of the tarsus, or the tarsus itself is inverted together with the cilia. Some authors have given to the latter the name of *entropion*, to distinguish it from the former, or the trichiasis. It seldom happens that all the cilia of the same lid are inverted, unless there is at the same time a complete inversion of the tarsus; more commonly the disease is only partial, or confined to a small border of the lid. The effects produced by such inversion are the most distressing; each motion of the lid produces pain and irritation in the eyeball; and, from this incessant friction, there is kept up a continual weeping of the eye. In the ultimate stage of the disease, there is opacity of the cornea, with vessels overshooting its margin; or the most inveterate form of pannus is induced, and the patient is nearly or completely blind.

When, instead of a single, there exists a double row of cilia, inverted upon the eye, the disease is termed *Distichiasis*. Scarpa, and other writers of much distinction, have denied the existence of such a form of the disease. The fact, however, is proved by the very extensive experience and observations of Professor Beer. I have seen more than one instance where these pseudo-cilia were very apparent, and differed from the natural, not only in their position, but in their colour, form, length, &c. The disease very rarely attacks the whole of the lid, but appears in distinct and separate patches along its margin.

The causes of these diseases are not always very apparent. Most commonly they may be traced to inflammation of the inner lid or tarsus, which has terminated in ulceration and cicatrisation. The strumous ophthalmia of the glands which border upon the margin of the lids, is very apt to terminate in trichiasis. It was formerly a common termination of the variolous inflammation of these glands. It is a common sequela of psorophthalmia, if long neglected or improperly treated. The disease in some cases arises from a redundancy, or relaxation of the internal skin covering the palpebræ, from the loss of the natural elasticity of the tarsus, or from a thickened and callous fold of the conjunctiva lining the palpebræ.

Cure.—Where the disease depends upon the inversion of a few scattered cilia only, and is unconnected with any derangement in the structure of the tarsus or eyelids, it may, in general, be remedied by plucking out these hairs by means of a small forceps. The pseudo-cilia should be removed in the same manner.

When the disease is caused by an inversion of part or the whole of the tarsus, it is evident that the relief procured by pulling out the cilia can be but transient; and that the principal object of the surgeon should be to correct that morbid alteration of the cartilage which constitutes the disease. This is best and most effectually done by taking out a portion of the integuments opposite to that part of the cartilaginous border which is inverted. By the contraction and cicatrization of this wound, the tarsus, together with the cilia, will be drawn outward into their natural position. The operation is best performed by the forceps of Bartsch, and the curved scissors. The surgeon, taking the instrument in his left hand, raises a fold of the skin immediately opposite the part where the trichiasis is greatest. Care should be taken, in raising up this fold, that no portion of the orbicularis muscle be included. The patient being directed to open his eye, the tarsus and cilia will be seen to have resumed their natural place and direction, provided a sufficient quantity of the integuments has been seized with the forceps. The fold, so included, is now to be cut off with a single stroke of the scissors. Little or no hemorrhage follows the operation, and this is easily checked by a little cold water.

If the excision be properly made, an oblong, oval-shaped wound will be the result. The lips of the wound are then brought together with sticking plaster, and a compress and bandage applied, as after the operation for cataract: it is seldom or never necessary to employ sutures.

Dr. Crampton's method of operation in cases of partial trichiasis, will be found to answer very effectually in removing the distortion. Conceiving the disease, in general, to originate from a thickened and contracted state of the conjunctiva, he has devised the following operation for its cure:—The eyelid being well turned out by an assistant, the surgeon, with his lancet, should divide the broad margin of the tarsus completely through, by two perpendicular incisions, one on each side of the inverted hair or hairs. This being done, the extremities of these perpendicular incisions should be united by a transverse section of the conjunctiva of the eyelid. The portion of cartilage contained within the incisions can then, if inverted, with ease be restored to its original situation, and retained there by small slips of adhesive plaster, or (perhaps what is better) by a suspensorium palpebræ, adapted to the length of the portion of the tarsus which it is intended to sustain.*

Mr. Saunders has recommended the excision of the tarsus itself, either in whole or in part, according to the extent of the disease;† but this is

* Vide *Essay on Entropion*, by R. CRAMPTON.—London, 1815.

† The same operation was practised by Dr. Dorsey, of Philadelphia. Vide *Elements of Surgery*, by JOHN S. DORSEY.—Philadelphia, 1818.

a most severe and tedious operation. Dr. Jäger, of Vienna, instead of removing the tarsus, takes away with a knife, or pair of scissors, the external border of the eyelid only, or that part which contains the cilia; and this practice has obtained the sanction of Professor Beer.

Where the disease is caused by a callous fold of the conjunctiva, it is easily removed by excising this part of the membrane.

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CHAPTER II.—Of the Diseases of the Lachrymal Organs.

Inflammation of the Lachrymal Gland, (Dacryoadenitis.)—The inflammation in this disease generally commences in the cellular substance which surrounds the gland; extending thence to the tissue which envelopes its acini, and seldom or never affecting the substance of the gland itself. The first symptoms which mark its invasion are an unpleasant dryness of the eye, and a fixed pulsatile pain of the temples or outer canthus, which extends into the orbit, or is propagated along the brows and temple to the jaws and ear. A hard, tense, and painful swelling is soon perceived in that part of the upper eyelid covering the lachrymal gland. The conjunctiva, excepting that portion of it near the external canthus, is seldom red or inflamed. From the gradual increase of the lachrymal gland, the eye is protruded from its socket, and the cornea is driven inward and downward towards the root of the nose. The motion of the globe outwards is generally impeded, from some affection of the rectus superior and externus muscles. Along with these symptoms, the sight is observed to decline more and more; the pupil contracts, or is immoveably fixed;* the pain increases, and there supervenes high inflammatory fever, accompanied with more or less of delirium.

If the inflammation is not discussed, the gland suppurates; the pain is now of a more throbbing kind, and the patient complains of an uneasy sensation of weight or coldness of the upper eyelid. A yellowish spot is observable on the conjunctiva of the bulb, or external surface of the eyelid, and a distinct fluctuation is felt in the tumor.

The disease is most common in young persons, and particularly such as are of a strumous habit. In the latter case, the inflammation is generally of a chronic nature, and the tumor may remain stationary for a long time. It is commonly excited by cold, or violent contusion of the gland; in some instances it has been caused by immoderate weeping, or by inflammation of the conjunctiva or eyelid.

As there is always danger lest the inflammation extend to other parts of the orbit, or involve the eye itself, it will be necessary, in the cure of this affection, to adhere to the strictest antiphlogistic measures. One or more general bleedings should be advised; after which we may resort to the use of leeches and blisters. These means may be assisted

* The affection of the iris, in diseases of the lachrymal gland, is easily accounted for, from the connexion of the nerves supplying this organ with the ciliary nerves, through the ophthalmic ganglion.

by cold lotions applied to the part, and the occasional use of purgatives.

If the inflammation do not yield to this treatment, or the swelling advances to suppuration, warm poultices of bread and milk, or fomentations of cicuta, hemlock, and the like, should be substituted for the cold lotions. The abscess should never be permitted to open spontaneously, as a troublesome fistulous sinus would prove the consequence. As soon, therefore, as the least fluctuation is perceptible in the tumor, the surgeon proceeds to open it with the lancet. The incision is seldom practicable from within; but is, in general, made from the external surface of the lid, and in a parallel direction with the fibres of the orbicularis muscle. The point of the lancet should be directed towards the groove of the gland, and the opening made of sufficient size to give free vent to the matter. The pain immediately subsides on the discharge of the matter, the protruded eyeball returns to its socket, and the vision gradually improves; but a greater or less degree of luscitas, or squinting, is generally the consequence. Sometimes the suppuration extends to the bones of the orbit, causing a troublesome fistula, and a continual discharge of an offensive ichorous fluid from the wound. The presence of caries may be easily ascertained by the introduction of a small probe.

More commonly, one or more of the excretory ducts of the gland are wounded, and there is a discharge of tears, or of tears mixed with matter, from the gland, (*fistula glandulae lachrymalis*;) or a small capillary opening is left in the upper eyelid after the ulcer has already healed, through which there is a continual oozing of tears. The only mode of relieving such an affection is by the application of the lunar caustic, or by the actual cautery introduced to the bottom of the wound.

Scirrhus of the Lachrymal Gland, (Scirrhus Glandulae Lachrymalis.)—The lachrymal gland, like the other glands of the body, may become the seat of scirrhus enlargement. The disease commences with a tumor near the external canthus, thrusting forward the superior palpebra. The eyeball is at the same time forced into the opposite direction, or downward and forwards, and in many instances is driven so far without the axis of vision as to impair considerably the sight. There is little or no pain in the commencement of the disease: as the gland enlarges, the patient experiences a sensation of pressure and tension, especially on moving the eye, and complains of an unpleasant dryness of the organ. If the tumor be examined, it will be found hard and unequal, or lobulated, and void of all fluctuation. The disease is at all times dangerous, as it seldom confines itself to the gland alone, but extends to all the adjacent parts.

Where the ordinary remedies for scirrhus prove unsuccessful, recourse should be had to extirpation. This should never be too long delayed, as the chance of success is always proportionate to its early performance. Professor Himley recommends the operation to be practised through the upper eyelid. It is preferable, perhaps, to divide the outer canthus, and dissect the tumor from beneath the lid. After

the removal of the gland, the eye generally returns again to its former position in the orbit.*

Hydatid of the Lachrymal Gland, (Hydatis Glandulæ Lachrymalis).—This disease is of very rare occurrence. It commences with a dull pain about the orbit, which in a few days extends itself over one-half the head. The eyeball at the same time is rendered dry; and, in a few weeks, from the great rapidity of the swelling, projects considerably out of the socket. If the eye be examined in the situation of the lachrymal gland, there will be found a tense elastic swelling, yielding slightly to any pressure made with the finger, but recovering its size again as soon as this pressure is removed. The progress of the disease is, in general, very rapid; so that, in a few weeks from the first attack, the patient complains of loss of rest, grows delirious, and eventually dies, with all the symptoms of confirmed apoplexy. The cornea, in the decline of the disease, assumes a dull glassy appearance. Under more favourable circumstances, the hydatid bursts, the parts suppurate, and a fistulous opening is formed, through which there is continually a small quantity of limpid fluid.

It is hardly possible to confound this disease with the scirrhus affection just described; the rapid progress and violence of the symptoms, and the distressing headache and delirium, are sufficiently characteristic of its nature. If more decisive evidence be wanting, it will be found in the spherical shape and peculiar elasticity of the tumor.

The disease may be in some measure relieved by puncturing the sac with a small lancet, and drawing off its contents. The puncture should be made in the most prominent part of the swelling, between the eyeball and lid; and the sac, if possible, taken away with a pair of forceps. Where this is not practicable, the wound is to be kept open by a tent, as long as any fluid exudes, in order to destroy the sac.

* Vide Mr. TODD on the Diseases of the Lachrymal Gland, in the Dublin Hospital Reports, vol. iii.—Also SCHMIDT, *über die Krankheiten des Thränen-Organs*. Wien, 1803.

CRITICAL ANALYSIS
OF
ENGLISH AND FOREIGN LITERATURE,
RELATIVE TO THE VARIOUS BRANCHES OF
Medical Science.

Quæ laudanda forent, et quæ culpanda, vicissim
Illa, prius, cretâ; mox hæc, carbone, notamus.—PERSIUS.

DIVISION I.

ENGLISH.

ART. I.—*A Practical Treatise on Diabetes: with Observations on the Tabes Diuretica, or Urinary Consumption, especially as it occurs in Children; and on Urinary Fluxes in general. With an Appendix of Dissections and Cases, illustrative of a successful Mode of Treatment; and a Postscript of practical Directions for examining the Urine in these Diseases.* By ROBERT VENABLES, M.B. Physician to the Henley Dispensary, &c. &c. &c.—8vo. pp. 214. London: T. and G. Underwood. 1825.

FOR what purpose this book was written, we cannot divine, unless it was to illustrate the truth of the old adage—that there is nothing new under the sun. It is the last work upon the subject, and, in our opinion, decidedly the worst. Our situation as reviewers condemns us to many a wearisome and unprofitable task: we are condemned to make many a fruitless plunge, ere we discover the pearl of which we are in search. It is not, therefore, to be wondered at if we are occasionally a little out of humour when our toils meet not with an adequate reward. Critics are generally considered a surly, ill-natured tribe, who will not be pleased. Now, though we do not at all affect the cynic, yet an involuntary exclamation of impatience will escape us when we are unnecessarily intruded upon. He who writes a book either actually has, or pretends to have, information to communicate, which they to whom it is addressed do not possess. He who actually possesses superior knowledge, and imparts it, is a public benefactor: he who only pretends to it, voluntarily exposes himself to criticism and to censure.

In his Preface, Dr. VENABLES informs us that two causes induced him to write this book,—viz. that he had discovered, first, that an excessive discharge of urine is frequently a cause of tabes in children; secondly, that phosphate of iron proves, when properly administered, almost as certain an astringent with regard to the excessive action of the kidneys, as opium in

that of the alimentary canal. Of such importance did these two facts appear to the mind of Dr. Venables, that he seems to have thought any other mode of communicating them to the profession, than in a large octavo, as too obscure and insignificant. That, however, he should have hid these two grains of wheat in two bushels of chaff, we do sincerely regret, for he is evidently an industrious man. We do not wish to damp his zeal; but, if he would follow the precept of the poet,—he knows to what we allude,—and not be quite so precipitate and hasty in his productions, we might expect from such industry something useful to the profession, and honourable to himself. As it is, this work will not be read (except by the few who, like us, are doomed to the task of reading every thing,) until PROUT and his fellow labourers are forgotten.

The first part of his book is taken up with observations on *Tabes Diuretica*, as it occurs in children.

“There is a cause of emaciation among children, which has hitherto attracted but little of the attention of the profession. I have often observed children to all appearance very healthy up to a certain period, when suddenly the constitution changes, the child emaciates, its health declines, and, without any obvious derangement sufficient to account for the gradual depravation of health, at last dies a most miserable object. In such cases, the head, chest, and abdomen, present no ~~pro-~~bid appearances sufficient to account for the wasting and gradual decline of health. Accident led me to a discovery of the real seat of disease in such cases; and, when the history of the complaint has been submitted to the reader, he will not be surprised that its nature and seat should have so long escaped general observation. (P. 1.)

The nature and seat of this disease has not, as Dr. V. would wish us to believe, escaped general observation. Dr. UNDERWOOD, in his work on the Diseases of Children, has devoted a chapter to Polydipsia, and another to Diabetes infantilis. In the former he mentions that ZUINGERUS speaks of immoderate thirst, accompanied with a great flow of urine, as a common affection among young children; and he adds, that in a little time their bellies become tumid, that they are subject to glandular affections, and fall into atrophy. This description seems to bear some resemblance to the *tabes diuretica* of Dr. Venables. MORETON, also, in his *Phthiscologia*, mentions consumption from diabetes as a common disorder among children. These writers have, then, very ill-naturedly anticipated Dr. Venables in his discovery; and this last new fact proves, like many others, to have been just as well known to our grandsires as to ourselves. That diabetes is a disease from which no age or sex can plead exemption, has long been known to every physician at all acquainted with his profession; so that for Dr. Venables to produce this as a

new fact, either evinces ignorance on his own part, or a very mean opinion of the attainments of his professional brethren, which it is our duty to convince him that they do not deserve.

Dr. Venables tells us that it was by mere accident that he stumbled on this fact—a child was presented to him for examination. “The head was free from pain, the functions of the brain regular, the respiration natural, the bowels free, and the secretions from them healthy.” Nevertheless, the child was greatly emaciated. The Doctor was sorely perplexed to divine the cause of this. What! could it be possible that every function should be regular, and all the secretions and excretions natural, and yet that the child should be rapidly wasting away? He determined, therefore, to cross-examine, and at length discovered that the urine was discharged in great abundance. The enigma was solved,—the merit of *Œdipus* was his, and “he had no longer any hesitation in referring those cases of emaciation, which he had previously considered as anomalous and unintelligible, to this genus.”

Now, such is the most unfortunate constitution of our mind, that, in spite of the positive assertion of our discoverer to the contrary, we cannot bring ourselves to believe that diabetes is so frequent a disease as he represents it to be. That more children may die of this disease than we are aware of, is very possible, and is a proposition which we feel no inclination to controvert. But we do not, and cannot, believe in its frequent occurrence; or that a large proportion of those who are treated for hydrocephalus and mesenteric affections, rickets, and all the other species of scrofula, are really afflicted with this disease. Nor do we speak on this subject without having engaged extensive opportunities of witnessing the diseases of early life. The date of the earliest case recorded in the Doctor's book is in the year 1818. Of these cases there are only eleven. The author has nowhere asserted that he has seen more, and he has not furnished us with any table by which we can judge of the comparative frequency or infrequency of their occurrence; so that, though the author, as physician to a public dispensary, was happily situated for the discovery of such cases, did they frequently occur, he has only been enabled to collect, since 1818, eleven cases; and the greater portion of these were not true diabetes. This is by no means a number that entitles him to call it a disease of frequent occurrence.

The first chapter contains an enumeration of the symptoms:

“The disease seldom, if ever, appears till after the child has been weaned. The reason of this, perhaps, is, that the exciting causes are seldom applied till after this period. A child which has continued healthy up to this time, will perhaps suddenly lose its usual flow of spirits, become dull and inactive, and, although no obvious disease may

be recognisable, yet the child will not appear in its usual health. It begins, after a very little time, to waste in flesh, and then gradually continues to emaciate. The skin becomes harsh, dry, and flabby, and seems to hang loosely about the body. The temperature is generally very much elevated, and, in the description of nurses, it will be said that 'they burn like a coal of fire.' (P. 10.)

In the early stages, the bowels are said to be regular, and the appearance of the alvine discharges is natural and healthy. The tongue does not give any indication of disease, until the patient becomes hectic, and then it is covered with a coat of mucus. After the disease has continued some time, the bowels become irregular, and the *fæces* are sometimes of a greenish hue; at other times they are natural when evacuated, but assume a greenish tinge on standing. At a more advanced period, the abdomen seems preternaturally full and distended; and the pulse, from the first, is accelerated, and has a hard wiry feel. "The most remarkable symptom" (remarkable, we presume, from not being remarked, for our author assures us that it is generally overlooked,) "is the inordinate discharge of urine." This is accompanied with great thirst; but the Doctor asserts that the quantity of urine greatly exceeds the whole of the aliment, both solid and fluid. This is an assertion to which we can scarcely assent, unless the author is prepared to prove that the body possesses some hygrometrical properties, and can imbibe moisture like a hair. There are cases of diabetes recorded, in which the quantity of urine did not at all exceed the natural proportion. There are others in which the quantity discharged was certainly enormous. CARDANUS describes the case of a girl, who passed thirty-six pints per diem, when her body weighed only 250 lbs. and her meat and drink only 7 lbs; and SCHENCKIUS mentions the case of a woman, who passed in a few days a quantity of urine, that outweighed her whole body. Were it not that these things do most undoubtedly appear in print, we should be inclined to disbelieve them. We fear, however, that we must intimate our assent to the opinions of Dr. Prout, who says that, in the "best authenticated cases," this enormous difference between the quantity of ingesta and urine has not been observed; and of Dr. Watt, who says that, in all the cases he had seen, the urine was less than the ingesta. "For a night or a day, or even a longer period, the urine might exceed what was taken in; but, on a more extensive average, it has always come short."

The urine is sometimes limpid, at others milky; sometimes of a straw colour, at others of a greenish hue. It is sometimes albuminous, and coagulates on the application of heat; and its specific gravity is increased. The emaciation is slow or rapid, according to the greater or less quantity of coagulable matter

which it contains. Sometimes it is tinged with blood, with mucus, or with pus. The most remarkable thing in the urine of diabetic patients, is the large quantity of saccharine matter that it contains.—It is useless to point out the identity of this description with that given by Dr. Prout.

Dr. Venables does not think the division into the insipid, and what he calls the “mellitic” form of the disease, is well founded. We shall not stop to argue this point. His own cases, however, prove that there is a disease, characterised by a large flow of urine, by great emaciation, inextinguishable thirst, and voracious appetite, in which the urine is not at all saccharine.

As the disease advances, the head becomes affected, and we have headache, vertigo, and delirium. The patient often dies comatose, sometimes apoplectic. The organs of sense, (we follow closely the arrangement of the author,) also become affected, and the patient often complains of unpleasant odours, bad tastes, and dimness of sight. His skin is dry and harsh, and hectic fever comes on, with profuse nocturnal sweats.

The disease frequently terminates in anasarca; ascites sometimes supervenes in adults, rarely in children. The enlargement of the abdomen in children may, he says, be frequently mistaken by a careless observer for ascites, or some mesenteric affection; which latter affection he regards as an adventitious, rather than an essential occurrence. Pulmonic affections he also considers as of a secondary and symptomatic nature. To us both of these opinions appear to have been hastily adopted, and without sufficient consideration. There can be no doubt that diabetes can exist without disease of the lungs, but it is equally certain that it is very often complicated with such disease; and, as we know as yet nothing clearly of the nature of diabetes, it is, we think, a little precipitate to exclude antecedents such as these, which have so powerful an influence on the general health, from the class of what are called in medical language *causes*. Indeed, Dr. Venables does afterwards enumerate among the causes of the disease whatever is capable of producing general debility. In the same precipitate manner, he concludes that the derangement of the digestive organs, which he admits to be a very prominent symptom, is a consequence rather than a cause.

To refer every thing to the kidneys, and to exclude from our attention every other portion of the economy, is to take a too narrow and confined a view of the subject. Dr. Prout has taken, in the following remarks, a view of the question more consonant to truth:—“No one will assert that the kidneys can form lithic acid from any substance indiscriminately presented to them; they must have the ingredients on which they operate

prepared in an uniform manner, and a series of preliminary operations must take place, every one of which must be presumed to be perfect, before the kidneys can be presumed capable of performing their duty correctly. The chief of these preliminary operations are digestion and assimilation; and hence it becomes evident that, if these important processes are in any way deranged, those of the kidney will be more or less affected."

We next proceed to the *morbid anatomy* of diabetes. Here again our author dismisses from his consideration every other organ but the kidney, and those immediately connected with it. The Doctor, however, has not, in our opinion, succeeded in establishing his favourite position—that disease of the kidney is the immediate cause of diabetes. The appearances which dissection has disclosed, have been very various; but the most common occurrence is that of enlargement of the kidney, and a gorged condition of its vessels. Sometimes the excitement has proceeded to inflammation, and "a whitish matter, resembling pus," has been found. Occasionally an abscess has been discovered; and Dr. Venables has seen two cases in which the kidneys were ulcerated. The ureters have been found more capacious than usual, and the renal arteries enlarged. Disease of the bladder has also occasionally occurred.—Such are the usual and unusual appearances of these organs. Those of most frequent occurrence are such as indicate a high degree of excitement, rather than a "very diseased state of the kidneys."

As to the other viscera, whatever morbid appearances they exhibit, they are to be forgotten entirely in considering the morbid anatomy of this disease, because Dr. Venables considers them rather as accidental occurrences, than as having any essential connexion with the disease. Graver authorities have, however, thought otherwise. Dr. WILLAN observes, that he never saw a case of confirmed diabetes, wherein there was not some considerable disorder of the constitution, or a defect of some organ essential to life.

The third chapter treats of the *causes*. In this category all diuretics are classed,—all spirituous and fermented liquors, acids, alkalies, and alkaline salts. Gin especially comes under his ban. Hard and sour ale, sour milk,—foreign, acescent, and home-made wines. These things may have a remote effect in producing the disease, for aught that we know; but we are inclined to think that it is a very remote effect indeed. The disease has always been a rare one. CULLEN saw only twenty instances of it; HEBERDEN witnessed the same number. Considering the extensive practice of these great physicians, this number is very small. It ought, however, to be very frequent, if such

causes had any decided and powerful influence in its production. By intemperate indulgence in some of these things, the general health may be destroyed; and we are inclined to believe that this disease seldom, if ever, arises until the constitution has received a severe shock, and the whole system has become depraved and vitiated.

In common with other writers on this subject, Dr. Venables believes that the disease may be transmitted from father to son.

The immediate cause of the disease, is some undefined and undefinable condition of the kidneys. "Of what nature are these changes, or wherein their difference consists, we probably shall never be able to determine."

Having thus described the symptoms, the morbid anatomy, the causes remote and immediate, we arrive at the section devoted to the *pathology* of the disease. Pathology, we are told, is the doctrine of these morbid alterations, by which morbid effects are produced. From this definition, we expected to find some new information on this difficult part of the subject; but we are merely told, that the author can no more account for the secretion of sugar, than why the kidneys secrete urine instead of bile. Instead of throwing any light upon the nature of the disease, we have again to travel over the same ground we have just past, and commence a new disquisition upon the causes of the disease, which we are again told are gin, brandy, acids, alkalies, diuretics, *et hoc genus omne*; and that, as these are the causes, diabetes arises from a "peculiar excitement of the kidneys."

It is well known that many substances are no sooner introduced into the system, than they are absorbed, and may be found mixed with the urine. These substances, we are informed, are accommodated with a more direct path to their destination than the long and circuitous route of the circulation. Of the "highways" of the body, we do flatter ourselves that we know something; of the "byways," nothing; and we confess that we know of no other means by which any thing absorbed can arrive at the kidneys, than through the medium of the arteries.

The voracious appetite, excessive thirst, and dry harsh skin, are easily accounted for. We are again told that all the other diseases of the viscera are secondary: here, however, he does qualify and limit his assertion, and admit that diabetes may be a secondary affection.

Chapter the 4th is on the *diagnosis*, and contains merely a condensed enumeration of the symptoms.

The succeeding chapter is on the *prognosis*. In this we are informed, that the young are more easily cured than the old; that remedies are more efficacious in the incipient than con-

firmed state of the disease; and also that it is more difficult to cure when some serious disorganization of the kidneys has taken place;—that the longer the duration of the disease, the greater will be the disorganization of the kidneys, and the less will be our chance of removing the complaint, &c. The supervention of dropsy is to be regarded generally, though not invariably, a fatal indication. In one case, where “dreadful pains were felt in the loins, the spinal marrow in the lumbar region was found, upon dissection, very much diseased.”

We advance, in the sixth chapter, to the *treatment* of diabetes. It is fortunate that, though we know little of the nature of the disease, we are possessed of a mode of treatment which has in many cases proved successful. The remedial means proposed by Dr. Venables do in no respect differ from those recommended by his predecessors. The exciting causes are, if possible, to be ascertained and removed. This alone will frequently be sufficient, in the early stage, to effect a cure. If, however, the excessive action of the kidneys continues, venesection should be employed. The experience of Dr. Venables as to the utility of this practice, is quite in accordance with that of Dr. Watt. The quantity of blood abstracted must depend upon circumstances; but he recommends us to have recourse to repeated venesections, rather than diminish the patient's strength by one large and copious detraction of blood. If there be pain in the loins, leeches, cupping glasses, and blisters, are recommended; and if, from the severity of these pains, we have any reason to apprehend disorganization of the kidneys and disease of the spinal marrow, caustic issues will prove of efficacy. The bowels should be kept open, and perspiration promoted. He also bears testimony to the power of opium in this disease, but advises its conjunction with an antimonial. In common with other writers, he advocates the exhibition of phosphoric salts, which he considers as having a powerful restraining influence upon the action of the kidneys. After asserting that phosphate of soda has such an effect, and adducing, in corroboration of his opinion, the testimony of Dr. SHARKEY, of Cork, he makes an observation, which appears rather contradictory of his previous assertion. He says that the alkalies and alkaline earths excite the kidneys, and that he has “his doubts” whether this property can be overcome by any combination.

However, the good effects which he expected from phosphate of soda were apt to be frustrated, “by its passing off by stool before its effects upon the kidney could be secured.” This circumstance determined him to substitute the metallic phosphates for those with an alkaline base. The experiment succeeded beyond his expectations. “I have been really struck

with the efficacy of the phosphate of iron, in excessive discharges of urine. The quantity is rapidly reduced under the use of this salt, and its qualities sensibly altered. The bulimia, which also attends on diabetes, is reduced, and the powers of digestion invigorated and increased." We cannot agree with Dr. Venables in attributing all these good effects solely to its astringent effects upon the kidneys. Indeed, we see no decisive proof of its having any peculiar and specific action on these organs. We can, however, readily believe that, along with other preparations of this metal, it may act as a tonic, and, by imparting vigour and energy to the whole system, may diminish the discharge, and promote the restoration of health.

It is now our duty to show that Dr. Venables is by no means the discoverer of this "new remedy," which is nothing but an old one brought forward anew. It is painful to us to be obliged to prove that his pretensions to this merit are groundless,—to subvert a reputation which he imagines himself to have firmly established; but justice demands this at our hands. Though he has failed here, a great field still remains open for his exertions. The map of medical science is but half unrolled; and even that portion is but ill filled up,—there are in it great voids and spaces; there is much terra incognita, much both to stimulate and reward industry. To this unoccupied ground we respectfully beg leave to direct his attention: his industry will reap a much richer reward from its cultivation, than from retailing at second-hand the opinions and practices of others.

If, then, previous to the composition of his Treatise, Dr. Venables had taken the trouble to read Dr. LATHAM's work upon Diabetes, he would have found the following remarks:—"For the purpose of restoring the vigour of the system, when the diabetic tendency has been checked, nothing would perhaps be better than iron combined with phosphoric acid, as it is found in the phosphat and oxyphosphat of that powerful mineral; and, when a purgative is wanted, soda phosphorata should always be preferred. In chronic diabetis, more especially, I have seen this plan very beneficially employed." The remarks of Dr. Venables are, however, deserving of attention, since his experience so fully coincides with that of Dr. Latham.

"The prophylactic treatment," we are told, "consists generally in increasing the strength, and promoting the healthy action of the different functions; and the proper regulation of diet, air, and exercise, and in shunning intemperance."

The Appendix consists of cases and dissections; and the volume is closed with a Postscript, containing directions for a practical examination of the urine, similar to those given by Dr. Prout and other writers, whose works are in the hands of the profession.

We have now given a fair account of the contents of this volume. We are not aware that we have omitted any thing of importance; we have suppressed nothing, distorted nothing. We have not condemned Dr. Venables unheard. We leave it to the profession to judge whether or not we have redeemed our pledge, and shown that he has constructed his work out of materials culled from the works of others. Those who have studied the writings of ROLLO, and WATTS, and PROUT, will find in this Practical Treatise no information which they did not previously possess. Those who take it up entirely ignorant of the subject will, of course, glean considerable information; but we should advise them to drink at the fountain-heads.

DIVISION II.

FOREIGN.

ART. II.—*Grundriss der Physiologie*. Von D. KARL ASMUND RUDOLPHI, Prof. d. Med. u. Mitgl. d. Königl. Akad. d. Wiss. Erster band.—8vo. pp. 297. Berlin, 1821.

Elements of Physiology. By K. A. RUDOLPHI, M.D. Translated from the German, by WILLIAM DUNBAR HOWE, M.D. Vol. i.—Pp. 254. London, 1825.

To those who are acquainted with the name of RUDOLPHI, merely as the author of a scientific work on the *Entozoa*, it may not be superfluous to mention that he occupies the chair of Anatomy in the University of Berlin. In this situation, physiology, as a matter of duty, must have engaged some share of his attention; but there are much more satisfactory proofs of his attachment to it as an object of study, and of the interest he takes in its advancement as a science, in the publications he has at different times given to the world, either in a separate form, or in the Transactions of the Academy of Sciences of Berlin.

Familiar with human anatomy, learned in comparative anatomy,—equally knowing in every other branch of natural history,—and possessing much acuteness and discrimination, he brings with him to the composition of a work on Physiology advantages not always possessed by those who have undertaken to present us with a summary of our knowledge on this extensive subject. We say extensive subject, because physiology, in the wide and proper acceptation of the term, embraces the organisation and functions of all living beings; and human physiology, which is but a branch of it, is never to be advanced to the rank of a natural science by the exclusive consideration of man, but must receive its most correct illustrations, and most solid support, from the investigation of the structure and functions of all living beings, from the anthropomorphous simiæ down to the simplest forms of animal and vegetable existence. Limited as our knowledge still is in this wide and almost boundless field of inquiry, it is from the constant reference

to facts in general anatomy and general physiology, in aid of its more specific object, human physiology, that the work of Professor Rudolphi, which we are about to notice, derives its greatest merit and best claim to commendation. Indeed, we are inclined to regard it, upon the whole, as the best work on Physiology which has been published, from the comprehensiveness and general correctness of its views, the complete and condensed nature of its details, as well as from the number and value of the facts which it contains.

Such being our opinion of the original work, it is with regret that we find ourselves unable to mention in favourable terms the manner in which it has been presented to the English reader. The faults of the translation are such, as in many instances to misrepresent, and in numerous others to render imperfectly, the meaning of the author: but the nature and extent of the errors of this publication we shall subsequently take an opportunity of pointing out,—at present we recur to the original.

The Introduction, having given a definition of physiology, presents us with the division of the subject adopted in the succeeding work, with a brief sketch of the aids to be derived from the accessory sciences, natural history, natural philosophy, chemistry, anatomy, and pathology; and with a list of the literature of physiology, or of the works which have been published upon it in different European languages.

Physiology is defined to be the history of the *human organismus*; and, as this is a term which has been misunderstood, and may occur frequently in the course of our analysis, we add the succeeding remarks to elucidate its meaning. A living organismus is never spoken of,—an organismus without life being inconceivable; when the first is formed, the latter invariably attends it: at the same time, we cannot say that life produces the organismus, or that the former only ceases when the latter is destroyed; so that a human carcase, or an animal, preserved in spirits, is not an organismus, but merely a certain amount of its parts. The organismus is the source, not only of the corporeal, but of the mental powers.

Physiology divides itself into two parts, a general and particular: the former viewing the organismus as a whole; the latter entering into the consideration of its individual parts. General Physiology includes, *a*, Anthropology; *b*, Anthropotomy; *c*, Anthropochemistry; *d*, Zoo-nomy. Particular Physiology includes, *a*, Sensation; *b*, Motion; *c*, Nutrition; *d*, Generation.

Part I. section i. *Anthropology*, or the natural history of man, compares him with other animals, and thereby establishes his peculiar and distinctive characters, so as to assign him his rank amongst created beings; whilst it likewise compares, or contrasts with each other, the various tribes of people inhabiting the earth, in order to discover the circumstances in which they resemble or differ,—the affinity or diversity between them.

Chap. 1. *Difference between man and animals*.—Belonging to the class Mammalia, and in external form, as well as in internal structure, more closely approximating to the Quadrumana, the resemblance between man and the simiæ was formerly greatly exaggerated. This

arose, in a great measure, from the circumstance of the Pongo, when young, having a greater similarity to man, and having been, therefrom, described as a distinct species, under the name of orang outang. The observations, however, of TILESUS, CUVIER, LAWRENCE, and those of our author, would render it extremely probable that the young Pongo is the anthropomorphous animal, the orang outang, which would thus merely exhibit one of those intermediate stages of development, wherein animals, in individual parts, more nearly resemble man. In making comparisons, also, between man and animals, we must take the former in his perfect state, and not select individuals in a state of both physical and moral deformity, as is shown to have been the case with all those instances about which so much noise was formerly made as exhibiting the original type of man.

The numerous and important distinctions between man and animals have all reference, without exception, to his destiny to live as a rational being, whilst animals, merely influenced by sensual impulse, never rise to the formation of general ideas. On the other hand, several distinctions, formerly supposed to exist between man and animals, (for which even moral reasons were supposed to have been discovered,) have, on closer examination, been found not to hold good; such as the presence of the hymen, and the existence of the menstrual discharge.

The upright gait is natural to man alone of all the mammalia, that is, it is a natural consequence of his structure; so that it is universal, and exists even in tribes living in the lowest state of barbarism. The peculiarities of structure in the lower extremities, pelvis, spinal column, and chest, connected with this erect attitude, are indicated, as well as those of the superior extremities, of the head, the greater proportion of brain, the preponderance of the bones of the cranium over those of the face, the facial angle, &c. We find it remarked, that the pieces of bone which correspond to the ossa intermaxillaria of animals, sometimes remain distinct to the fourth month in the human embryo. Frequently a trace, or indication, of them is seen, in the form of a suture behind the incisor teeth; sometimes they are preternaturally developed, so as to form the double hare-lip, or rather double hare-lip fissure, in which case our author has hitherto seen but one incisor tooth on each side in the projecting pieces of bone. The naturally unarmed and defenceless state of man,—his prerogative of speech, facility of adaptation to existence in every climate, slow growth, and late puberty,—his intellectual and moral character,—and, lastly, the diseases which he has in common with other animals, and those which are peculiar to him, are successively brought forward.

Chap. 2. *Differences of mankind from each other*.—All the people of the earth coincide in the possession of those distinctions from animals which have been pointed out, and collectively constitute one genus; but they differ in the most manifold manner from each other, in stature, in the form of the body generally, and of its individual parts, more especially of the skull and of the face; in the texture and colour of the skin and hair; and perhaps also in perfectibility, which does not seem uniform in all the inhabitants of the earth.

Stature is one of the least constant, and therefore one of the least im-

portant, differences. It is, upon the whole, greatest among the inhabitants of the temperate zones, and least amongst those who live in high northern latitudes: the Tenuels or Patagonians, who attain the height of from six to seven feet, are the highest; and the Laplanders and Eskimaux, who seldom reach five feet, the lowest in size of human beings. The greater or less stature of whole nations will be found to depend on the greater or less development, longitudinally, of every part of the body; whilst, in the case of isolated tall individuals, it will be found connected with the development of a particular part, the spinal column or lower extremities.

The form of the body, no doubt, presents considerable differences amongst the individuals of the same nation; but it is unquestionable that, in certain original stocks of men, there prevails a predominating fineness of form, a greater degree of symmetry, and a more athletic make; from whence we descend, through numerous gradations, to the extreme of human deformity, in the Australian negro. It is in the form of the head, however, that the principal diversities exist among mankind; either all parts of the cranium, especially the forehead, being much developed, or the latter receding, and the sides of the cranium being compressed; whilst, on the other hand, the jaws and zygomatic arches either project or recede,—differences which do not occur gradually, but are evident even in the fœtus. The forms of the bones of the cranium, and of the face, have considerable influence on those of the soft parts,—as on the position of the eyes, the direction of the nose, form of the chin, &c.; whilst others depend on the soft parts themselves,—as the narrow aperture of the eyelids in the Mongols, the tumid lips of the Negro, &c.

The colour of the body is in some tribes white, in others brown, yellow, red, or black, with various gradations of each. It is mainly dependent on organisation, and not upon climate; the skin of the Negro, for instance, besides being black, has a peculiar softness and lubricity.

With the colour of the skin, there generally is a corresponding colour of the hair; and these are connected also, in most instances, with certain differences in quality. The yellowish blond hair of the northern Europeans is soft and fine, the dark and black hair of the southern, on the contrary, harder and coarser, yet that of the Hindoos is fine and long; the black hair of the Americans and Mongols is thick and rough, that of the Negro woolly and tufted. Besides quality, the hair differs also in quantity: its growth is greatest in the European stock, less so in the others. The little beard possessed by the American tribes is well known; and something similar is the case with the Mongols.

In muscular power, the Europeans exceed all others; whilst it is least in some Mongolian and Malay tribes.

But it is not only in corporeal qualities that the stocks of men differ; their intellectual powers do not appear to be the same in degree, and this is connected, apparently, with the greater or less development of brain. The case of an individual Mongol or Negro, under foreign guidance and instruction, accomplishing something, is no argument against the general inferiority of these stocks.

Perhaps, even the parasitical animals of men differ. In the Russians and adjacent Prussians, and in the Swiss, we meet with the *Bothrioccephalus latus*, (*tænia lata*, Linn.)—in the other Europeans, and in the Greeks, the *tænia solium*. Our author only knows of one case, that of a lady, (perhaps of mixed origin,) where both were met with. Of the intestinal worms of the Americans, Negros, &c. we know nothing.

The differences above enumerated sometimes occur singly, and are then of little consequence; but generally several of them are united in a certain combination, are permanent, and thereby form essential characters. The Negro is not only black, but the skin has a peculiar softness and a peculiar perspiration; his hair is woolly, his cranium compressed, and the forehead flat and receding; the jaws prominent, &c. The attempts, therefore, to account for these differences singly, avail nothing; for instance, taking the complexion or the features, and showing that in the same nation varieties of these occur: how they all occur combined, as in the Negro, is to be explained. The attempts alluded to have proceeded upon the assumption that all mankind have descended from a single pair, who had the European form; an assumption which, after some observations on the difficulty of its accounting for the present extent of the population of the earth, and the spread of this from a single point, our author declares to be in his opinion untenable, when we regard the differences among mankind. Uncontaminated races of men, even in the most opposite climates, have never altered their character: the Negro is the same now as in the remotest periods of history, and is the same in America as in Africa; the Jews and Gipseys still show their foreign origin. The produce of Europeans in other climates is never Negro nor Malay.

Although the different stocks of men breed with each other, this is no test of their common origin: how many similar animals and vegetables occur in different regions, without our having thereby cause to derive them from a single spot? What should hinder that, at different places, under the same conditions, they should originate? When we find in foreign animals, and in foreign climes, (for instance, in Brazil,) the same intestinal worms as in domestic animals, shall we derive them from one spot? In as little does the breeding of mankind among each other prove them of but one species; for, in the first place, even was it shown that all animals in a state of nature breed only with each other, this would prove nothing of man: and, in the next place, we hardly know of men in this wild state, and, where we do, they also restrict themselves to their own stock,—nay, even in civilised communities, this is generally the case. If our only test of species among animals was the proof of experience having shown that they do not breed together, we must, indeed, then enumerate but few; for, of how many have we ascertained this?

Upon the grounds, therefore, which guide us elsewhere in natural history, M. Rudolphi regards mankind as constituted of several species; and, on this account, he objects to the term race, or variety, for distinguishing the different stocks of men, proceeding, as it does, on the assumption, which he thinks cannot be established, of all being descended from common parents. Several of these dis-

inctions are so great and so permanent, that it were to be wished we had marks equally characteristic with regard to other animals. The principal indicate to us the European stock, the Mongolian, the American, and the Negro. BLUMENBACH assumes five; but our author thinks the Malay a mixed race. The characteristics of these different stocks we need not go through: we may only remark that, in opposition to the celebrated naturalist just mentioned, our author ranks the Laplanders, Finlanders, Eskimaux, and Tschutski, as belonging to the European or Caucasian stock; and this from personal observation of individuals of these different tribes. Blumenbach had referred them to the Mongolian.

Section II. *General Anthropotomy*.—After pointing out VESALIUS, FALLOPIUS, HALLER, and SOEMMERING, as having paid some attention to parts of this subject, but that to BICHAT belongs the merit of having subjected to multiplied experiment and observation the various tissues which, either upon anatomical or physiological grounds, he considered elementary, and having thereby almost formed a new science, general anatomy,—our author proceeds, in Chap. 1, to consider the *simple solids of the body*. Bichat's division of these into twenty-two systems, is objected to as being physiological, rather than anatomical; and the following are adopted as the elementary solids:—Cellular tissue, horny tissue, cartilaginous tissue, osseous tissue, tendinous fibre, vascular fibre, muscular fibre, and nervous fibre.

Cellular tissue (ZELLSTOFF, SCHLEIMSTOFF, *tela cellulosa*, *mucosæ contextus cellulosus*,) occurs in two states, uniting the parts of the body to each other, and forming the basis of these parts. In the first state, as enveloping or uniting cellular tissue, it is most easily recognised, and appears in the living body as a delicate, semifluid, shapeless, extensible substance, congealing after death, especially when at the same time exposed to the influence of the air or of water, into an irregular flaky texture of fibres and plates. It is denied to be cellular; and our author would rather, with BORDEU, have called it mucous tissue, were it not that under this term has been long understood something quite different; whereas, the universally accepted name of cellular tissue admits of no ambiguity. It is throughout moistened with a watery halitus, and in many places contains fat. In the tropical countries of Asia and Africa, a small thread-like worm, the *filaria medinensis*, is generated in the human cellular membrane; in Europe, one of another description, the *cysticercus cellulosæ*, is met with, and not a winter passes without our author finding them in some dead bodies, and of the same species as exist in monkeys and swine.

The horny tissue (*tela cornea*) is divisible into scales or into fibres. Its cut surface is uniform and smooth, and in thin layers it is transparent; it is hard and elastic, has neither vessels nor nerves; and, being at the same time one of the worst conductors of caloric, is well adapted for covering the more highly-organised parts. It forms, on the one hand, the external envelope (*epidermis*) of the body, with the nails and hair; on the other, the internal membrane (*epithelium*) of the alimentary canal,—perhaps also of the respiratory passages, of the organs of urine and generation, and of the vascular system: nay, all serous mem-

branes seem highly analogous to it. As proofs that the internal lining of the intestinal canal distinctly shows itself here and there as horny substance, are adduced the instances of the gizzards of the Gallinaceæ, and the two first stomachs of the ruminating animals, where the epithelium is evidently of a horny nature; and, in the badger, our author observed the same scaly appearance on the villi of the intestines as is so frequently seen on the epidermis.

The descriptions of the cartilaginous and osseous tissues offer nothing peculiar, or adapted for our analysis.

The tendinous fibre (*fibra tendinea*) is firm and white, and frequently of a silvery lustre. It constitutes, on the one hand, flat bundles of very various form; on the other, membranous expansions: the former are partly connected with muscles as tendons, or they form the numerous ligaments of the body; the latter, with less developed fibres, constitute the perichondrium and periosteum; or, with fibres more strongly developed, the dura mater and aponeuroses; tendinous fibre and cartilage combined, form fibro cartilage.

The vascular fibre (*fibra vasorum*) is principally recognised as arterial fibre (*fibra arterialis*). It is white, flat, hard, and brittle, and by those characters sufficiently distinguished from muscular fibre; but it likewise exhibits no oscillatory motion during life, and is found to have a different chemical composition, and, when boiled, has quite another taste. As it seems also to be established that arteries, even in warm-blooded animals, are generated anew, another proof is thus afforded of the difference of vascular fibre from muscular fibre, which last, in warm-blooded animals, is never generated or reproduced. This generation of arteries in false membranes, and various tumors, serves to establish a new and evident resemblance between the minute arteries (*arteriellen*) and the fibres of the uterus; which last come and disappear, and, on this account alone, can never be regarded as muscular fibres.

In the description of the muscular fibre, it is stated as being late of forming in the embryo, as being never regenerated in warm-blooded animals, and as never occurring in morbid growths, nor in other parts of the body than where muscles naturally exist.

The nervous fibres (*fibræ nervæ*) are very delicate, very soft, and of a white colour. In the nerves, they are enclosed in very vascular envelopes (*neurilema*); in the brain, they are without envelopes, and, though always very readily distinguishable in many parts, yet in others they are, as it were, so coalesced as not to be distinguishable, at least not in every condition of the brain. This is still more the case in the spinal marrow and ganglia of the nerves. Examined microscopically, the nervous matter seems to consist of small irregular bodies, usually denominated globules, but which to our author seem much too soft, and not sufficiently separate from each other, to admit of so definite a form being assigned them. The grey substance, which is in many places united to the medullary matter, is composed chiefly, but not entirely, of vessels. The termination of some of the nerves of sense is quite manifest, but every where it seems to be the same,—viz. perfectly distinct: that is to say, a nerve never amalgamates with a vessel, a gland, or the fibre of a muscle; but the nerves surround the

vessels, and the smallest muscular fibres, in the form of a network or of a collar. Nervous matter is undoubtedly reproduced in warm-blooded animals, but is not then distinctly fibrous. Nerves are never met with in morbid growths; yet it is not ascertained if the vessels of these growths be without them.

Chapter 2, *of the compound parts*.—The various organs of the body are composed of the preceding simple parts, into which they are all capable of being reduced. Of the compound parts, the vessels and membranes are the simplest, but they again vary very much amongst each other. The vessels are general or particular: to the first belong the arteries, veins, and absorbents; to the latter, the canals of the different secreting organs, the biliary and salivary ducts, the ureters, vasa differentia, &c. They have all at least two coats: those containing blood have three. Longitudinal fibres are easily detected in the veins; but our author has never been able to perceive transverse fibres in the human veins, nor even in the vena cava of the horse; nor has he been able to make out fibres of any description in the thoracic duct, either of man or in that of the horse. The general vessels are widely extended: the absorbents, distinctly such, only occur in the vertebrated animals; vessels containing blood are found in the crustaceæ, arachnoides, molluscæ, and many vermes. Insects (strictly so called) have, in their stead, a peculiar general system of vessels, containing air. The particular vessels extend much further, and are to be detected even in some of the infusoria; for instance, in the vibriones.

The membranes, also, are either general or particular: to the former belong the serous, mucous, and fibrous membranes, the corium, and epidermis (which has been already noticed); to the latter, several coats of the eye, membranes of the brain, &c. In the description of the serous membranes, it is stated that they are throughout void of vessels and nerves, not one of which enters into their structure. Besides those which form shut sacs, as the peritoneum, pleura, pericardium, tunica arachnoidea cerebri, tunica vaginalis testis, the bursæ mucosæ, and the synovial membranes; there are also ranked as serous membranes the internal membrane of all vessels, general or particular; that of the alimentary canal, of the air-passages, and that of the organs of urine and generation. It is denied that any serous membrane itself secretes, but that the fluids transude through them, in the same manner as the perspiration through the epidermis, without any peculiar pores being thereby necessary. They are said also to be equally incapable of inflammation as the epidermis; and that, as in the case of the deposition of various diseased matters on the surface of the body, the epidermis has nothing to do with them; so also, in the case of internal disease, the serous membranes are not concerned. It is only in consequence of disease of the subjacent parts, or of deposition upon their surfaces, that these membranes become changed, thickened, &c.

The mucous membranes (*tunicæ mucosæ*, *t. propriæ*, *t. vasculosæ*, *t. nervæ*,) have no free side, but are placed between other membranes; are amply supplied with vessels and nerves, and usually are provided with mucous glands (*glandulæ muciparæ*). They stand in the same relation to the skin as the serous membranes do to the epidermis. They

cannot, as has been asserted by some, be considered as composed of several layers; they may vary in thickness, but are always single, and the mucous glands, whether superficial or deeper-seated, are placed in them.

The fibrous membranes have been already noticed, in speaking of the simple textures of the body.

The skin, cutis, or corium, the envelope including the whole body immediately under the epidermis, is more dense and compact externally, looser internally, amply provided with vessels and nerves, and in many places with sebaceous glands. It is thicker on some parts of the body than others, as on the face, on the back, or soles of the feet. From its external dense surface appearing so different from its internal loose one, the former being coloured in the Negro,—from effusions taking place in disease between it and the epidermis,—and from the latter falling off and being reproduced, it has been assumed that a peculiar membrane, the rete mucosum of MALPIGHI, existed between the corium and epidermis; and not only this, but a number of other parts or divisions, have been made out in this situation; all of which are artificial. The seat of the colour of the skin in the Negro is partly in the epidermis, as is readily observed by raising it by the application of a blistering plaster, and partly in the external surface of the corium, which is easily seen to be uniformly black, on soaking the skin of an individual of this stock in boiling water.

The more compound parts are next considered: the glands, the viscera, the connexions of the different parts of the body, and their association into systems, are pointed out. The symmetry which prevails in the human body, and the general preponderance of the right side, are brought under review; whilst allusion is made to the duplicity of many organs, their progressive development, and great uniformity of texture, form, size, and number.

Section III. *General Anthrochemistry*.—Under this head we find the difficulties of animal chemistry pointed out; the unavoidably unsatisfactory nature of its results, in so far as living organised matter is concerned, alluded to; but its great importance, notwithstanding, illustrated,—all organic changes being accompanied with chemical processes. It is only a chemist, who is at the same time a physiologist, who can further and advance animal chemistry; the greatest progress of which is to be looked for from its increasing intimate connexion with physiology and pathology.

Chapter 1, *on the simple elementary substances*.—We are unacquainted with the ultimate elements of animal bodies, which are probably few in number; nor are we justified in assuming the existence of a peculiar animal matter. The elementary substances at present acknowledged as existing in the human body, are oxygen, hydrogen, &c.

Chapter 2, *general organic substances*.—These are gelatine, albumen, &c.; on each of which are made some interesting remarks, the views of BERZELIUS being, upon the whole, adopted.

Chapter 3, *general compound parts*.—Under this head are ranged the blood, lymph (fluid contained in the absorbents), horny tissue,

cartilage, bone, arterial fibre, muscle, and nerve; the composition of each being gone through, the assumption of HALLER with regard to the amount of blood in the human body being from 28 to 30 pounds, is considered not to be exaggerated, in opposition to the opinion of BLUMENBACH, who seems to rate it so low as eight pounds. A number of interesting facts with regard to the globules of the blood, their form, and size, in man as well as in animals, are collected together. The most recent knowledge we possess of the analysis of this fluid, and the other compound parts, is given.

Chapter 4, *on the general chemical processes of the human body*.—It is impossible to regard the materials of our body in any other light than as in a state of multiplied relations or actions upon each other, and these, again, chiefly as chemical processes, or at least as accompanied by such; whether this be in the excretion of some substance or the appropriation of others,—the motion of a muscle, or any other vital action. The general chemical processes give occasion to certain phenomena, of so striking and characteristic a kind, that we are readily induced to attribute them to the agency of peculiar matters, instead of referring them to the universal state of chemical action among the more obvious and tangible elements. These phenomena, or matters (if they must be so called), are heat, light, and electricity. A particular species of heat seems peculiar to all organised bodies, without exception; and we regret that the nature of the subject, and our limits, do not permit us to do more than allude to the number of important facts collected, and judicious observations made on the animal heat of the various classes of animals,—the vermes (Linnæus), the annulata, molluscæ, crustaceæ, fishes, amphibiæ, insects, birds, mammalia, and lastly man. The *source* of heat is attributable in living beings, as well as in unorganised bodies, to alterations in constituent composition. Its *degree* in animals is mainly dependent on the alterations in composition effected by means of respiration; the arguments in favour of which opinion are strongly put. The belief of its being connected with the nervous system is untenable: this system bears no proportion in animals to their degree of heat; for, if this was the case, man ought to have the highest temperature, his nervous system being more developed than that of any other animal; the mammalia should exceed the birds; the latter ought to differ little from the amphibiæ; the insects should rank far below fishes, neither of which are the case. The influence of the nervous system upon the whole animal economy, upon the circulation, and respiration, is so great, that we need not wonder at injuries of it being attended with diminution of the animal heat. The permanent uniformity of the degree of animal heat, under exposure to increased or diminished degrees of temperature, is owing, on the one hand, to the uninterrupted action of the organ on which the production of it depends, and, on the other, to particular accessory means, called into activity in the organism by those very temperatures.

The luminous or phosphorescent appearance presented by some animals is then noticed, and the electrical properties of others, with a full description of the electrical organs in the torpedo and gymnotus electricus, and the phenomena presented by these animals.

An allusion to the subject of spontaneous combustion concludes the chapter.

Chapter 5, *on the decomposition of the human body*.—With the cessation of life, terminate all those chemical processes in an organised body, whose object is its preservation, and the remains either do not act upon each other, if withdrawn from the atmospheric influence, or, if exposed to this, mostly facilitate their mutual decomposition. The decomposition of organised bodies is characterised by fermentation and putrefaction. The saccharine and acetous fermentations are not confined in their existence to vegetable substances and some animal fluids; for, if the body of a strong healthy man, who has died suddenly, without being poisoned or from preceding hemorrhage, be dissected in mild weather, there is invariably, in a very short time, perceived a disagreeable sweet odour; after this, an acetous smell for a few days; and to this succeeds putrefaction. The rigidity of the body, which is the invariable consequence of death, and antecedent of putrefaction, seems to have attracted a considerable share of attention from our author. With NYSTEN, he attributes it to the muscles, but not, with that writer, to any remains of muscular power: on the contrary, he connects it with some chemical change taking place in them, from the cessation of the nervous influence.

Putrefaction, and the circumstances which favour or impede it, are then described.

Section IV. *Zoonomy*, takes a general view of life in its most usual and common phenomena, and endeavours to investigate the circumstances and conditions of its existence and continuance, until its final cessation. The term Biology, as expressive of this, is objected to, since it includes too much; more especially since TREVIRANUS has published his great work under this title.

Chapter 1, *on the phenomena of life generally*.—Organismi, or organised bodies, are distinguished from unorganised by consisting of parts which collectively contribute to the preservation or propagation of the whole, by passing through certain stages of development, and exhibiting a periodicity in their actions. All parts of organismi, solid as well as fluid, are endowed with life. A property common to every part of every organismus is excitability or incitability (*incitabilitas*), by which is meant the power of being urged or roused by stimuli to certain vital actions. These stimuli (*incitamenta*) are external or internal, psychological or physical. The vital phenomena of some parts of the organismus are so little evident, that it is only by comparing these parts in their healthy and diseased state that they are to be discovered. In the soft parts, a common character of the incited state, or of incitement, is a certain fulness or turgescence, which may be augmented or decreased, but never entirely ceases until death. Along with this common character of fulness or turgescence, several systems of organs are likewise distinguished by the possession of a peculiar kind of incitability. In the membranous parts, we call it tonicity—contractility; in the muscles, muscular power—irritability; in the nerves, nervous power—sensitivity. From all these is distinguished the intellectual power (*vis psychica*), yet it ranks next the nervous.

Chapter 2, *on the source or cause of life*.—The cause of life is equally inscrutable as the ultimate principle in physics. The opinions that it is simply chemical, that it is oxygen, or the matter of heat or of electricity, are erroneous; and equally so those which would attribute it to the reciprocal influences of oxygen, carbon, nitrogen, and hydrogen. All these substances are no doubt necessary for life, but of themselves they produce it not, or any thing living; and they are found in the dead remains of living beings. Upon the whole, our author seems to incline to the opinion of REIL, that life arises from the form and composition of matter: the latter can merely be capable of vitality, whilst life itself, or the action of the organismus, first appears along with the form. What composition determines the form of the forthcoming organismus, we are quite ignorant:—we know, however, positively that such only is capable of life which derives its origin from other organismi, an organismus never being formed out of inorganic matter. The expression, *a vital principle*, might be tolerated, if used merely to designate briefly the unknown cause of life; but it becomes most exceptionable, if it be supposed that we thereby explain any thing, or that this vital principle is a something which, being added to the organismus, endows it with life. The designating by individual terms, for the sake of brevity, the peculiar properties or actions of the different systems, need not be objected to; but, independent of the intellectual power, which stands quite alone, it is considered sufficient to assume the following, —viz. incitability, tonicity, irritability, and sensibility, and which are merely manifestations of the same life in different parts.

The opinion that the vital properties are merely modifications of the physical,—that they are merely the latter enhanced (*potenzirt*), is shown to be untenable; as likewise that which supposes that there is nothing dead in nature, and that there is one universal life, of which each individual life is an efflux. It is impossible to trace a progressive enhancement. What resemblance has elasticity with muscular action? What physical power can be compared with the nervous? Where is the connecting link between the material and intellectual worlds? If the *universal life* is to have a meaning, we must then recur to the old doctrines of emanation, where every thing is an efflux of the godhead; an hypothesis which explains nothing, and stops all inquiry. Finally, the addition of a soul to the body throws no light upon the subject of life. We must, therefore, be contented with considering life as simultaneously given with the organismus, derived from, and propagated by, organismi, without being able to separate and attach it to a particular cause. In a word, we can trace a few of its phenomena, but of its nature we are entirely ignorant.

Chapter 3, *on the different states of life, and their causes*.—Perhaps the beau-ideal of a human being, the most perfect harmony between the utmost possible development, intellectual and physical, has never existed. Even a large development of both in one individual is rare,—usually one preponderates, and frequently both are defective.

Health and disease are then characterised; and the differences of these, according to the temperament, sex, and age, of the individual,—

or according to the climate, mode of life, kinds of food, &c. pointed out and described. In the observations upon climate, we do not find our author attributing so much influence to it as those do who consider all mankind as derived from a single pair. Much more influence is attributed to the originality of the stock, degree of civilisation or mental cultivation, mode of life, habits, food, clothing, &c.

Chapter 4, *on the cessation of life*.—All organised beings bear in themselves the germ of destruction, the mere action of the organs rendering them by degrees more and more unserviceable; and life would sooner terminate, were it not that, during its decay, all the functions are performed with greater tardiness. In those individuals who die simply of senile debility (*marasmus senilis*), the powers of life are gradually exhausted, and its phenomena sometimes so little apparent, that we almost doubt their existence; as was the case with an individual between eighty and ninety years of age, whom Rudolphi saw for several days before death. Most men, however, and even aged men, die of disease.

Strictly speaking, the time given to sleep should be deducted from our life. Besides this, many animals pass a considerable part of the year in a state of torpor, or rather of suspended animation. The difference between this state of asphyxia in animals, and those instances where men have been overwhelmed and buried for a length of time, and afterwards found alive, is, that the latter have always preserved their consciousness. Having noticed the distinguishing character of suspended animation in man and animals,—viz. the short time the former can remain in this state,—it is observed that we possess very imperfect information with regard to many circumstances attending suspended animation in man; but that they appear in some degree illustrated by observing what takes place during the suspended animation of hibernating animals; a description of the phenomena attending which state is then given. The opinion that cold is the principal agent in producing this state is expressed, and the existence of any peculiar structure or organisation in hibernating animals is denied.

The belief of the existence of life in particular parts after the general life has ceased, in perfect animals, is shown to be erroneous. The absorption and exhalation which take place after death are not vital phenomena; and the supposed growth of the nails and beard after death has arisen from the circumstance of the skin shrinking, and leaving those parts more exposed.

Having now concluded our analysis, we may take the opportunity to observe, that the work is composed in the form of distinct paragraphs, or of aphorisms, which are numbered, and to each of which are annexed annotations or notes. These notes, varying in number and extent, as the matter of the aphorism may seem to demand, are not placed at the bottom of the page, but in the body of it, immediately subsequent to the aphorism to which they belong; a situation to which, by their importance, they are well entitled. The plan itself (at least as here executed) offers considerable advantages in the composition of a Manual, allowing the compression into a small space of much valuable

observation, illustration, reference, and criticism, which could not with propriety otherwise find place.

As instances of the manner in which the subjects are treated and the work composed, we shall translate one or two extracts from the original; and, in order to indicate the nature of the errors into which the English translator of the work has fallen, we shall characterise by italics those passages, the sense of which have been misunderstood in the translation; taking care also to give in foot-notes the original along with the faulty translations themselves, that our readers may compare the two together.

The first extract we shall make is from the chapter which treats of the characteristics of the different stocks of men.

§ 63. In the Americans, *the common characters of the skull have not yet been fully made out.** In general the head is small, at least in the South Americans; the forehead low, or slanting backwards. The features are strongly marked, the cheek-bones projecting. The hair is black and coarse, the growth of beard thin and scanty; the colour of the body a bright or dark (copper) red.

Annot. 1.—The Americans constitute a number of tribes, which are however nearly allied to each other, and inhabit the whole of America, with the exception of the northern part, occupied by the Eskimaux. (§ 60, B.)

The more northern the region they inhabit, the deeper, upon the whole, is the redness of their skin; yet here also, as in other races, we meet with variations in colour. Frezier (*Relation du Voyage de la Mer du Sud, aux Côtes du Chili, &c.*—Amst. 1717, 8vo. t. i. p. 121,) mentions *Chilians with fair complexions and a tinge of red in their cheeks, originating, in his opinion, from kidnapped European mothers*;† which is not unlikely. Ye. Ign. Molina (*Saggio sulla Storia Naturale del Chili*, 8vo. ii. Bologna 1810. 4to. p. 273,) instances Chilian mountaineers with fair hair and blue eyes; and Felix de Azara (*Voyages dans l'Amérique Méridionale*, tom. ii. Paris, 1809, 8vo. p. 76,) remarks of the inhabitants of Guaiana, that the colour of their skin is fair, and that some have blue eyes.

Annot. 2.—The skulls of the North Americans represented in Blumenbach's *Decades*, have *little or nothing peculiar in them; more, however, have those, plate 46 of an Aturian*,‡ plates 47 and 48 of Brazilians, and plate 58 of a Botocudan. Caribbean skulls (certainly in part deformed by compression during infancy,) are represented in the same work, plates 10 and 20; in Lawrence's *Lectures on Physiology*, plates 10 and 11; by Hernauld, in the *Mém. de l'Acad. des Sciences*; and in the *Bibliothèque de Planque*, tom. iii. p. 646, pl. 72, fig. 1.

The drawing (on a detached sheet) of the *Oneidas*, who were, a few years ago, exhibited at Comte's theatre in Paris, is not amiss,§ but the whole head is not visible; as is also the case with the North-American Indian in Blumenbach's *Abbild.*

* "Ist das Gemeinschaftliche des Schedels noch nicht völlig ausgemittelt."—"The skull, as a whole, is not fully developed." (Howe's *Translation*.)

† "Erwähnt schon Chilesien mit weisser Gesichtsfarbe und etwas Roth auf den Wangen, und leitet diess von den (geraubten) Europäischen müttern ab."—"Informs us that the people of Chili have white complexions, with a tinge of red on their cheeks; and considers this to be on account of the rape of European mothers." (*Ibid.*)

‡ "haben wenig oder nicht Eigenthümliches, desto mehr aber Tab. 46, eines Aturen."—"Nothing in them peculiar, but more particularly that of an Aturian, pl. 46." (*Ibid.*)

§ "Die Abbildung der Oneidas, welche vor ein Paar Jahren auf Comte's Theater in Paris gezeigt wurden, (auf einem eigenen Blatt,) ist nicht übel."—"The drawings of the Oneidas, which were exhibited a few years ago at Comte's theatre in Paris, (on one sheet,) is not bad." (*Ibid.*)

Nat. Gegenst. plate 2. A Siminole, in Will. Bartram (*Reisen durch Nord-und Süd-Karolina*; Berlin, 1793, 8vo. p. 246, taf. 6,) is pretty good. The drawings of Indians of Mehoacan, in Humboldt, (*Vue des Cordillères, et Monumens des Peuples d'Amérique*; Paris, 1810; folio; pl. 52, 53,) are evidently not portraits.* The figures in the *Present State of Peru*, (London, 1805; 4to. plates 5, 6, 9, 13, 15, 17, 18, 20,) are, for the greater part, embellished. The Prince Max. von Neuwied (*Reise nach Brasilien*, 1 B. Frankf. a. M. 1820, 4to.) has given drawings of some Indian tribes of the Puris, plates 2 and 3; of the Patachios, plate 7; of the Botocudos, plates 10 and 11, p. 319 but, in these the form of the head has, perhaps, been little attended to. The natives of *Terra del Fuego*,† represented in Sidney Parkinson, (*Journal of a Voyage to the South Sea*; London, 1773; 4to. plate 1,) seem to be portraits. Through the kindness of M. Olbers, our anatomical museum possesses two skulls of Brazilian Indians, viz. of the Puri race; of which I shall elsewhere give a more detailed description. They are both skulls of very old individuals, the teeth having fallen out, and the alveolar processes being effaced; notwithstanding which, the greater number of the sutures are still manifest. This, however, sometimes occurs in old individuals amongst us.

Moreover, these skulls differ from all others with which I am acquainted, and seem intermediate between the European and the Mongolian. The glabella is broad, and the cheek-bones particularly so, but the latter less so than in the Calmuc; and the breadth of that part of the upper jaw-bone which contains the teeth is much less. Hence, also, is probably the reason of an incisor tooth in both skulls not having protruded, but remaining within the upper jaw. If this narrowness of the upper jaw-bones, in contradistinction to the great breadth of the cheek-bones, be constant, a very evident character would thereby be established.

Our next extract is from that part of the volume which treats of the Blood.

§ 160. The size of the globules of the human blood I have invariably found to be very small, on frequent examination of that of myself, and also in that of others; and, like Blumenbach, (*Inst. Phys.* p. 11,) who estimates them at the 3300th, or as Sprengel, (*Inst. Phys.* i. p. 379,) at the 3000th, I also have found them from the 3000th or 3200th to the 3500th of an inch in diameter; so that a square inch of surface contains nine millions of globules. In fish, I have found them from the 2000th to 2500th of an inch in diameter; so that about four millions would cover the surface of a square inch. In the land salamander, the lesser diameter of the globules is to the greater as seven to ten; seventy of them cover the surface of the tenth part of a square line, and 700,000 that of a square inch; consequently, the proportion they bear to those of the human blood, is as $12\frac{5}{7}$ to 1. In the same ratio, however, as they increase in size, do they diminish in number; and, if we take the mass of the globules collectively,‡ that of man is much larger than that of the animals just mentioned.

Annot.—Lar. Spallanzani (*De Fenomeni della Circolazione*; Modena, 1773; 8vo. p. 210. *Experiences sur la Circulation*; Paris, an. 8; p. 226,) found the size of the globules of the blood in the frog and the tadpole the same, but the number greater in the former. On this point I have no personal experience. In the red blood of several mollusca,|| (*Solen Legumen*, *Tellina nitida*, *Chama anti-*

* "Sind wohl keine Portraits."—"Are certainly not worthy of being called portraits." (*Howe's Translation*.)

† "Des Feuerlandes."—"Finland." (*Ibid.*)

‡ "Und nimmt man die Masse der Blutbläschen zusammen."—"Thus the mass of the blood-vessels collectively." (*Ibid.*)

|| "In dem rothen Blut mehrerer Mollusken-die Bläschen."—"The vesicles in many of the mollusca." (*Ibid.*)—Omitting the "red blood."

quata and calyculata, *Arca pilosa*, but particularly in the so often examined *Arca glycymeris*.) Poli (l. o. tab. 2, fig. 1, 5,) found the globules much larger than in man, so that he compares the former to the latter as hemp-seed to millet-seed. I also have found the globules much larger in the punger; and similar observations are met with in Hewson. Whilst examining the blood of the proteus, I did not employ the micrometer, but the globules appeared* to me to exceed in size all that I had already seen, and at least to equal those of the land salamander. Those of the frog, the lizard, the *tortoise*,† and the common fowl, are at least one-half less, but much larger than those of man, and even those of fishes. Sprengel must either have made a mistake in the number whilst committing his observations to paper, or there is an error of memory, when (Inst. i. p. 379,) he makes the globules of the common fowl as small as those of man: they are as large again, and resemble those of the amphibiae in form, as Hewson has represented, and Gruithuisen described them. I have been thus circumstantial on this subject, because I believe that, in the variations alluded to, will, at a future period, be found the key to some very important physiological truths. Neither the form nor the size of the globules can be a matter of indifference. What Poli asserts of their turgescence or collapse is interesting, which he considers dependent on the vigorous or enfeebled state of the animal. Micrometrical investigations have their difficulties, but it would be wrong to neglect them on such a subject.

We have thus given a long, but we trust not uninteresting, account of RUDOLPHI's work. Had the translation before us been more accurate, we should have had pleasure in referring to it; but being, as it is, calculated to mislead, we feel ourselves called upon, in justice to our readers, to point out its imperfections. Unwilling as we are to depress the interests of any one who has laboured in the cause of science, we would advise Dr. HOWE to make himself better acquainted with the German language, before he publishes the rest of the work. Nay, there is occasionally an apparent ignorance of some common points in natural history, which makes us rather doubtful with regard to the translator's general qualifications for his task: thus, at page 76, he speaks of the "*spine* of the cuttle-fish," merely because the German expression for the bone of that animal is "*der rückenknöchel*;"—at page 176, the torpedo is said to be "*a species of very many varieties*," whereas Rudolphi says it is "*a genus of very many species*;"—and again, "*an immense variety has belonged to a former age*," for "*a gigantic fossil species has belonged to a former age*." Instances of this kind might easily be multiplied, but the enumeration would be tedious and unnecessary, because we think we have already said enough to justify the censure we have passed. Finding many mistakes in the Preface, we compared the original with the translation at various parts, (pages 21, 23, 33, 43, 53, 73, 75, 76, 176, 180, &c. &c.) and it was only after this careful investigation that we determined to express ourselves so strongly.

* "*allein die Bläschen schienen*."—"When the vesicle appeared." (Howe's Translation.)

† "*Der Schildkröten*."—"Turtle." (*Ibid.*)

ART. III.—*Recherches Anatomico-Pathologiques sur la Phthisie.* Par P. C. A. LOUIS, Docteur en Médecine des Facultés de Paris et de St. Petersburg; Membre adjoint de l'Académie Royale de Médecine de Paris, Correspondant de celle de Marseille. *Précédées du Rapport fait à l'Académie Royale de Médecine, par MM. BOURDOIS, ROYUR, COLLARD, and CHOMEL.*—Pp. xxiv. 560. Paris: chez Gabon et Ce. 1825.

Anatomical and Pathological Researches concerning Phthisis. By P. CH. A. LOUIS, Doctor of Medicine of the Faculties of Paris and St. Petersburg, &c.

FEW diseases have exercised the pens of medical writers so often, and to so little purpose, as the one which is the subject of the present article. Although its history and symptoms have been detailed accurately from age to age,—although its pathology has been investigated with a patience and minuteness deserving of a happier result,—still this terror of parents, this fatal destroyer of all that is fair and promising in youth, pursues its destructive course, little (if at all) controlled by the united efforts of the learned of every age and country, and continues to form the most prominent feature in the records of the annual mortality of most of the European nations. Neither can we hope that the exertions of M. Louis will tend to change this melancholy prospect; although, in saying so, we by no means wish to depreciate his labours: on the contrary, we consider that his researches constitute a body of information relative to phthisis, rendering it nearly impossible for any thing to be added to it, and almost perfect, as far as the pathological anatomy of the disease is concerned; but still, with regard to treatment, it offers neither novelty nor improvement; and we moreover think that it affords us too many reasons to conclude that a successful treatment is, in the present state of our knowledge, very little likely to be obtained, and that the most we can expect is to be enabled, in some cases, to keep the malady in check; while the pursuits of business or pleasure, in which mankind is perpetually engaged, forbid us to hope that even this object can be attained in any great number of instances. Let us not be mistaken. We do not reproach M. Louis for not having said more upon the treatment of phthisis; for, in the first place, *that* was not his professed object; and, in the next place, he makes no pretension to any superiority of the kind, and dismisses this part of his subject in nine pages, observing, that he has only to say *un mot sur le traitement*.

M. Louis's work naturally divides itself into two parts: the first containing a minutely accurate account of the diseased appearances of those who died of phthisis,—not only of the contents of the thorax, but of every organ of the body. The second part describes the symptoms of the disease, and is, as well as the first portion of the work, interspersed with many highly interesting cases, illustrating the latent, the chronic, and acute phthisis; together with the various modes in which the fatal termination takes place.

A pretty long advertisement (twenty-four pages) ushers in the work, in which the author explains his design in undertaking it. "The cases

which served as a basis to our researches, says M. Louis, were taken at the Hospital la Charité, reckoning from the three last months of the year 1821: from that epoch, the history of all the patients admitted into the wards of M. CHOMEL have been collected, comprising forty-eight beds, equally divided between male and female patients."

In order to do complete justice to this undertaking, we find that our author renounced private practice to pursue this inquiry, and that he passed three, four, and sometimes five, hours daily in the hospital, never bestowing less than two hours upon each anatomical investigation. The total number of cases, the result of which is given, amounts to 123, of which fifty are recorded in the work itself. It is to be observed, however, that, during the three years which our author has consecrated to this labour, the number of patients has amounted to 1960: of these, 358 have died; 127 of this number died of phthisis, and forty others, who perished of different diseases, had also tubercles in the lungs. Such are the strong claims to our attention which M. Louis possesses.

We now proceed to consider the contents of the first part of the volume, premising that we cannot attempt a copious analysis of a work extending to nearly 600 pages, but that we shall endeavour principally to mark those points of interest which have struck us in the perusal.

Our author commences by confirming the opinion of LAENNEC, that the existence of tubercles in the lungs is the cause, and constitutes the essential character, of phthisis; and he therefore rejects the division of this disease into tubercular, granular, cancerous, melanose, calculous, and ulcerous, as attempted by BAYLE. After describing the appearance of tubercles, with which we are unfortunately too familiar, he observes that they are almost always largest, most numerous, and more advanced in progress, towards the upper part of the lungs. The tubercles were accompanied with productions of a very different character, small round bodies of a homogeneous structure, shining, and of considerable hardness, from the size of a small pea to that of a grain of millet, which are called granulations. These constitute, as M. Laennec has observed, the first rudiment of tubercles; and these are also, as well as the tubercles themselves, larger and more numerous in the upper part of the lungs. At a certain period of their existence, they presented an opaque yellow spot in their centre, and, the higher they were situated, the larger was this spot. Most frequently they were found at a certain distance from the pleura, but in about a third of the subjects this was not the case; in one instance only they existed on the superficies of the lungs. Though it is not easy to define the period necessary for these granulations to acquire the size of a pea, in some cases their development is very rapid, not occupying more than three or four weeks; in others, years appeared necessary to produce this effect.

This greyish, semi-transparent matter sometimes was found in other forms, in irregular masses; and it was sometimes found, though rarely, in other organs of the body. A certain quantity of this matter was always to be found around tubercular excavations of any considerable size.

Another kind of substance was also sometimes met with in the lungs of those who died of phthisis, described also by Laennec: it was of a

consistence less firm than the granulations, and more transparent, reddish, though sometimes pale and having the appearance of jelly.

Most commonly tubercles were found in both lungs; but in five instances they were confined to the left side, and twice only to the right. The softening of the tubercles took place at very different periods: in some cases, from the twentieth to the fortieth day from the commencement of the malady, though commonly it required a longer time. It followed the same progress as the transformation of the grey matter into tuberculous matter, beginning in the centre of the tumor, and descending from the upper part to the base of the lungs. Sometimes, however, instead of being successive, this change took place simultaneously throughout a considerable extent. Such instances were confined entirely to the acute phthisis.

The cavities of tubercles have been found entirely empty before the end of the third month: at this period their parietes are usually soft, and lined with a false membrane, which is easily removed. When the malady was of an older date, their parietes were more or less hard, and combined with other circumstances of less importance; but, whether large or small, recent or of long standing, these excavations communicated with the bronchiæ by a greater or less number of openings; the mucous membrane of the one, and the false membrane of the other, being intimately united at the opening. The matter contained in these excavations differed in many respects, especially in regard to the date of their existence. When recent, it was thick and yellowish, similar to common pus; when of long standing, the liquid was greenish or yellowish, of a dirty disagreeable aspect, of a middling consistence, sometimes marked with blood, at others very red, though generally without odour. The matter from these excavations had sometimes the smell of animal substances which have been macerated for some time, and this odour was independent of the size of the cavities.

Such are the principal remarks made by M. Louis relative to the lungs.

Two curious cases are subjoined; in one of which a large excavation was filled by a fibrous substance, instead of pus; the other presented the remarkable circumstance of the existence of a fragment of the pulmonary tissue, perfectly healthy in appearance, enclosed in a cavity, without adhering to any part of its parietes.

Pleura.—Adhesions of the lungs to the pleura were the most common appearance; so much so, that, out of 112 instances, only one was found in which both lungs were perfectly free from them. A proportion was also always observed between the adhesions and the internal malady. An extravasation of a clear serous fluid, to the extent of about a pint, was also met with several times in the cavities of the pleura. This extravasation, which occurred in about a tenth of the patients, sometimes came on very suddenly. The same effusion was, however, found to take place at the termination of other chronic affections; and, excepting in diseases of the heart, in about a fourth part of these cases. This seems to indicate that this species of hydrothorax is really independent of the original malady.

The Epiglottis, Larynx, and Trachea.—M. Louis remarks, that pathologists have been in the habit of confining their observations principally to ulcerations of the larynx, whilst those of the epiglottis and trachea have escaped their notice. Ulcers of the epiglottis are, however, scarcely more rare than those of the larynx, bearing the proportion of eighteen, twenty-two, and thirty-one, to similar affections of the larynx and trachea, out of two hundred subjects carefully examined.

When the trachea is ulcerated, the mucous membrane is of a vivid red colour; though occasionally, when the ulcerations are numerous, but small, it preserves its white appearance: it is in the lower half of the trachea that the redness is most marked. When small, these ulcerations were pretty equally distributed throughout the canal, and vice versa; their character was otherwise the same. In some subjects, a certain number of cartilaginous rings were denuded, and sometimes destroyed in part. Our author thinks that the situation of large ulcerations at the posterior part of the trachea, arises from the habitual passage and residence of the expectoration at that part. In the third part of the cases, where this canal was not ulcerated, the mucous membrane was of a red colour, increasing in depth towards the bifurcation. It was more intense also towards the fleshy portion, and depended, most probably, upon the same causes as the ulcerations.

Ulcers of the larynx were not quite so common as the above, and showed themselves seldom unless as accompanying them: their seat was most commonly at the union of the chordæ vocales, one or other of which was frequently destroyed.

Ulcers of the epiglottis were met with in a sixth of the cases, and five times only without complication with those of the larynx and trachea. The ulcers of the epiglottis were frequently of some depth, but the mucous membrane did not appear to be much thickened. The laryngeal surface was always affected, and generally the lower portion only.

No instance occurred of tubercular granulations being found either on the surface or in the substance of the epiglottis, larynx, and trachea; so that inflammation solely may be considered as their cause. These ulcerations were also much less common in women than in men, in the proportion of one to two.

Our author's remarks upon the condition of the *Circulating System* will not detain us long. The heart presented no remarkable alterations in structure; the pericardium, as might be supposed, exhibited some traces of inflammation in a few instances, and a few ounces of serosity were found in its cavity in about one-tenth of the cases; so that, as far as phthisis is concerned, the appearance of this organ did not materially differ from those often met with at the termination of other chronic complaints. Redness of the internal and middle tunics of the aorta was found in about one-fourth of the subjects examined, and these principally in individuals from the twentieth to the thirty-first year of their age. Other organic alterations of the coats of the artery were also observed, but in a proportion different from that usually met with in other diseases. The yellow, white, or cartilaginous spots were only observed after a certain period of life, from thirty-six to forty; and

then they existed, in a greater or less number, in all the individuals examined. Their presence was not denoted by any particular symptom; and our author doubts their commonly asserted origin from inflammation.

Pharynx and Œsophagus.—The lesions of these parts are not frequent. Out of eighty subjects, the pharynx was only twice found to be affected with ulcerations, which were numerous, small, and equally distributed throughout its whole extent. Ulcerations of the œsophagus were also found exactly in the same proportions. The internal surface of this canal was sometimes covered with a kind of false membrane: in this case, the epidermis of the œsophagus had disappeared, but the mucous membrane remained quite sound. There did not appear to be any symptoms indicating the presence of these diseased conditions: nevertheless, the bodies of individuals, who died of any other disease excepting phthisis, did not present either ulceration or softening and thinning of these parts.

Stomach.—Several remarkable changes were observed in this viscus, both with respect to its volume and position. In nine cases out of ninety-six, the stomach was three times its natural size, and of course descended below its natural position. These changes were peculiar to phthisical patients; and our author conjectures that incessant coughing may be the cause. Independently of this increase of size, the mucous membrane of the stomach was softened, and had become thinner, in several subjects; it was even destroyed in some, and of a red colour, of a greater or less degree of intensity. This softening of the stomach existed in a fifth of the bodies examined. The parts wherein it was most observable were of a bluish or yellowish cast, and remarkable for the number of large vessels, sometimes filled with black blood. The mucous membrane was white, and semi-transparent; it was extremely soft, so as occasionally to have scarcely more consistence than moderately thick mucus: under this, the cellular tissue was commonly healthy. It would appear, from other observations, that the above conditions of the mucous membrane are the result of inflammation. Neither, says M. Louis, does the discoloration and thinning of this membrane contradict this assumption; for the long continued application of a blister will produce the same effects on the skin. The above lesion was more frequently met with in women than in men.

Redness, united with a thickening and tuberculated appearance, was sometimes observed; and these appearances our author considers to be most decidedly the effects of inflammation.

Ulcerations of the mucous membrane occurred in a twelfth of the cases: they were usually small, not numerous, and complicated with some other diseased appearance of the part. Other deviations from the healthy state are also mentioned as occasionally remarked,—such as general redness of the whole membrane, disappearing after a maceration of two or three hours; general softening, without any alteration either of colour or thickness; in one case, an appearance of cicatrization of the membrane, and in another the conversion of the muscular coat, for a small extent, into a cartilaginous substance. It is

to be remarked, that these alterations of structure are not peculiar to phthisis, but they are met with, in very different proportions, in subjects dying of other diseases.

The duodenum was almost always found in a natural state. In three cases only were there ulcerations; in a few others, the mucous membrane was reddish, and sometimes of a grey colour, which appeared to arise from an infinite number of black points, with which it appeared to be sprinkled. Frequently the mucous follicles were observed to be increased greatly in size, but without any alteration of structure. But these appearances were equally remarkable in patients who died of any other chronic disease.

Our readers will perceive that M. Louis treats of the duodenum by itself, restricting the term *small intestines* to the jejunum and ileum.

After devoting a page or two to a description of the healthy appearance of the mucous membrane of these intestines, our author observes, that the elliptic patches formed by the agglomeration of mucous cryptæ, and which are met with in the natural state of these parts, participate very little in the lesions of the mucous membrane that surrounds them, and are often the seat of disease which that membrane does not partake of. These patches were the most ordinary seat of ulcerations in those who died of fever, as well as of phthisis: they were met with in five-sixths of the phthisical subjects. When they were confined to the mucous surface, the cellular tissue was very much thickened; and, when that was destroyed, the muscular coat was equally thickened; so that, in proportion as one membrane was destroyed, the next had become thicker. The mucous membrane was sometimes also redder than natural, but it was seldom softer or more dense.

The granulations met with in the small intestines were of two kinds; sometimes resembling the tubercular matter, at others whiter and harder, almost cartilaginous. These last (M. Louis calls them semi-cartilaginous,) were very numerous, existed the whole length of the intestine, their number and size increasing towards the cœcum; and they were met with from the size of a small pin's head to that of a pea. These granulations were occasionally situated upon the patches above mentioned, but most commonly in the intervals between them. The tubercular granulations were not found in any instance so numerous as the above; and to these succeeded small ulcerations, the mechanism of which was the same as that of the tubercular excavations met with in the lungs.

Ulcerations were still more common, and therefore appeared to be often independent of either species of granulations. The dimensions of these ulcerations varied from one line to five or six inches; they were largest and most numerous towards the cœcum. They were variable also in form: when small they were round, elliptical when larger; and the linear form was the most rare. They did not differ less in colour. Their structure also was different according to their size; and they frequently seemed to be produced by the re-union of several small ones.

Besides the above-described lesions, small abscesses, of the size of a pea, were occasionally found; and these existed where there were nei-

ther ulcerations nor tubercular granulations. These abscesses have scarcely ever been observed but in phthisical subjects. When the small intestines were sound, or nearly so, they contained a greater or less quantity of mucus, of various colour and consistence, sometimes streaked with blood; but, when ulcerations were large and numerous, instead of mucus there was a fluid, more or less thick, of a reddish colour, and of a strong odour.

Many of the above appearances are common to other diseases besides phthisis, but the tubercular granulations and the ulcerations appear to belong solely to this; though these latter have certainly been found, very rarely, in other cases.

Excepting the semi-cartilaginous granulations, the morbid appearances of the *large intestines* were similar to those of the smaller ones. We may remark, however, that the softening of the mucous membrane appears to be the effect of inflammation, coming on during the last days of the patient's life.

The *lymphatic glands* were frequently tuberculous, sometimes more or less red and increased in size. Those which presented most frequently the tuberculated appearance were the following, in the order in which they stand,—viz. the glands of the mesentery, the mæso-cæcum, the mæso-colon, the neck, the loins, and axilla. With respect to the bronchial glands, M. Louis affirms that they are not oftener tuberculous than those of the mesentery. Of these latter glands, all were not equally subject to this affection: those nearest the cæcum were generally the most diseased. They were seldom met with in a softened condition; owing, most probably, to their recent date. The mesenteric glands, when tuberculous, had acquired a more considerable size than ordinary: when they exhibited a small number of tuberculous points, their tissue was of a colour more or less red, and they were often somewhat softened. But in some cases these glands, although they had acquired some increase of size, had not sensibly changed either their colour or consistence; so that if, on one side, inflammation appeared to have had some influence in the development of the tuberculous matter, on the other it appeared, in many cases, to have had no share in it. M. Louis asks, whether the appearance of these tubercles had constantly any reference to the inflammatory condition of the mucous membrane to which they corresponded? In every case, he observes, in which these glands were tuberculous, ulcerations of the small intestines were found; and these ulcers had not taken place without a primitive or consecutive inflammation of the mucous membrane: they were of themselves, indeed, a perpetual source of irritation.

The glands of the mæso-colon and the loins were less frequently tuberculous than those of the mesentery. The lumbar glands were found tuberculous in only five cases out of sixty.

The cervical glands were more or less tubercular in the tenth part of the subjects; and in one-half the number the mucous membrane was redder than natural. In one case only the cervical glands, changed into tuberculous matter, gave rise to pain; and this patient furnished the only example of tubercles developed in the axillary glands.

When the bronchial glands were tubercular, they were generally of a large size, and of a grey or blackish colour.

These morbid appearances seem to be peculiar to phthisis: out of ninety-eight individuals, who died of other chronic diseases, no instance of tuberculous lymphatic glands was met with, though inflammation of the mucous membrane of the intestinal canal, as well as ulceration, was frequently observed; which forms an additional ground for believing that inflammation is not the only, nor the most important, agent in their transformation.

The *liver* presented, in about one-third of the subjects, the appearance of a fatty transformation. In this condition, the liver was pale, of a fawn colour more or less deep, spotted with red both within and without. It preserved its shape, but was almost always increased, sometimes even to double its natural size. The great lobe was usually the seat of this alteration; and then the liver covered a great portion of the anterior face of the stomach, extended two or three fingers' breadth below the false ribs, and occupied the epigastric region. In one case it was found in the middle of the belly, and two inches distant from the pubis. In texture it was usually softer than natural. When the alteration was more advanced, it greased the knife and the hands like common fat.

The causes of this alteration appeared to our author obscure; but it is remarked, that it is almost peculiar to phthisical subjects. Sex also appears to have some influence in producing it, having been observed only in ten male subjects out of forty-nine. Neither the strength nor weakness of the constitution, nor the age of the patient, seem to have any connexion with its production.

This condition of the liver may be produced very quickly. It was observed in one case where the whole of the symptoms of phthisis ran their course in fifty days; though the rapidity or slowness of the original disease did not influence the proportion of fatty transformations in the liver in other cases. M. Louis knows no symptoms that particularly indicate this state; and therefore there is only one circumstance, the increase of size, that can lead to the suspicion of its existence. Whenever it was met with, no other organic lesion of the liver existed in conjunction with it. Indeed, these were very rare; twice only was any quantity of tuberculous matter found in it. In another subject, a woman of twenty-nine years of age, the middle lobe was destroyed, and a fibrous cyst occupied its place, nearly round, and twice the size of the part which it replaced.

In the *gallbladder* no appearances, that would seem to be exclusively belonging to phthisical subjects, were found.

The Spleen.—If, says M. Louis, the ignorance with regard to the uses of this viscus renders the study of its morbid appearances less interesting than that of other organs, their number and frequency ought to excite the zeal of observers; and therefore he has thought it right to enumerate those which he has met with. These alterations regarded the consistence and volume of the organ, and the development of accidental tissues: these were of two kinds; one, the tubercular, which was observed in

seven out of ninety bodies, carefully examined. The tubercles were very numerous; they were not encysted, and the viscus round them was healthy: in no instance was the grey tubercular matter seen by the side of them. The second kind consisted of round, yellowish, shining granulations, elastic and humid, and very different from the tubercular matter. They were placed in the midst of the spleen, which was softer and larger than natural. These granulations were met with in only one case. The volume of the spleen was diminished in fifteen subjects; and increased to double, triple, or even quadruple, in sixteen. M. Louis could not connect this increased size with any previous affection of intermittent or continued fever. It differed no less in consistence than in size. Excepting in the absence of tubercles, the other diseased conditions of the spleen do not appear to be peculiar to phthisis.

The *urinary organs* seldom presented any remarkable diseased appearance. In the renal capsules, a small quantity of tuberculous matter was observed in two cases. The kidneys were in all respects perfectly sound in three-fourths of the subjects. In three cases only they exhibited a certain quantity of tuberculous matter; and in one case this extended to the corresponding ureter. The rarity of these appearances induces M. Louis to relate the case in which they were observed. We present our readers with a translation of it.

"A hair-dresser, twenty-four years of age, scrofulous, and of a delicate constitution, born of healthy parents, suffered a severe sprain of the right foot at twelve years old. After having experienced violent pains for two years, they ceased, and only re-appeared occasionally. Some fistulous openings established about the ankle-joint, afforded, almost without interruption during four years, a certain quantity of pus. The patient had, however, not discontinued his occupations, and often went considerable distances without inconvenience. He coughed and expectorated for nineteen months prior to his admission into La Charité, which was on the 16th February, 1822. When the cough first began, severe pain in the right side of the chest had required the application of a great number of leeches opposite to the site of the pain; he had not experienced hæmoptysis, and the difficulty of breathing only existed for six months. His appetite had fallen off for more than a year, and within the last four months had entirely forsaken him; the thirst was intense, and the diarrhœa frequent. He did not recollect to have been troubled with sweats, but had suffered from shivering fits for fifteen days.

On the 17th February, his emaciation extreme, with considerable debility. He has neither headache, nor pain in the loins or limbs. His intellects sound; his speech short; the voice clear; respiration accelerated; cough rather frequent, sometimes in fits; expectoration not abundant, greenish, and opaque. A clear sound on percussion generally throughout the chest, excepting between the shoulders and under the right axilla. The skin hot, heat violent in the evening; no sweats nor chills during the preceding night; the pulse moderately accelerated. The tongue clean, thirst great, appetite nearly gone;

nausea occasionally after coughing. Four liquid evacuations, with flatulence and colic pains."

The following days, the diarrhœa was more severe, but the other symptoms remained unchanged. He was a little deaf from the 12th to the 15th of May, the day of his death, which took place after twenty-four hours of delirium.

On examining the body, nothing particular was observable as to its external appearance. (The brain was removed for anatomical investigation.) In the chest, the lungs adhered to the pleura costalis, at the upper and posterior part. At the top of the left lung, there was a small tubercular excavation; and, throughout the remainder of its extent, a good many grey, semi-transparent granulations, round which the pulmonary tissue was quite sound. On making an incision from the summit to the base of this organ, a great number of round openings were seen, which were nothing more than the orifices of the bronchiæ, more or less thickened, and uniformly dilated, almost to the very surface of the lung. The same lesions existed on the right side, but the granulations were more numerous, and the bronchiæ still more dilated. The heart was of a middling size. In the abdomen, the mucous membrane of the stomach was red around the cordia. The small intestines presented some ulcerations; some very large ones were found in the cœcum. The colon, and the other viscera, excepting the right kidney, were in a healthy state. This kidney was of the natural size, and its position was not changed; but it was yellowish in the upper third of its extent. The corresponding ureter was hard, was four lines in diameter, and was less dense and smaller as it approached the bladder. The tissue of the kidney was destroyed in the upper third, and replaced by a yellowish opaque matter, really tuberculous, which rested upon a false membrane of the same nature. This was prolonged downwards, lined the pelvis of the kidney and the ureter, to the parietes of which it was firmly affixed. Though firm on that side, it became soft and friable in proportion as it approached its outer surface, it had from half a line to a line of thickness, and was more consistent in the ureter than elsewhere. By accident, the bladder was not examined; but our author observes, that this viscus, though more or less distended in many cases, afforded no other diseased appearance; and with respect to the kidney, he adds, that, in two hundred subjects examined, who had died of other diseases, not a single portion of tuberculous matter was found in any one.

Respecting the *male genital organs*, the only remark we shall extract is that, out of forty subjects, in which the prostate gland, the vesiculæ seminales, and the vasa deferentia, were carefully examined, three presented a greater or less quantity of tuberculous matter in the prostate; and in one, whose case is related, this matter existed in all these several parts. Another fact of some importance is here incidentally mentioned by our author. He says that, wherever the tubercular matter was found to exist out of the lungs, whether in the spinal marrow, the mesentery, spleen, or prostate, &c. it was always developed in an equal degree, not having become softened; which would seem

to indicate that one and the same cause was operating at the same time upon all these points.

The *female organs* of generation offer no point of peculiar interest to arrest our attention. The uterus is said generally to have been smaller than natural. Once a small quantity of tubercular matter was found in this viscus, and twice a little was perceived in the ovaria.

In the *peritoneum*, an effusion of serum was found in many cases,—that is to say, in a fifth part of the subjects,—in the quantity of from one to eight pints. Men were affected in the same proportion with women; and it was not more frequent where the liver and mesentery were diseased, than in the contrary state. Sometimes, together with the serum, there was either a certain quantity of thick pus, or a yellowish, soft kind of false membrane. This was certainly the result of acute peritonitis, and was only met with four times, and had taken place only a few days before death. Ancient adhesions were found in three subjects. In one case, a number of miliary granulations existed on the free surface of the peritoneum, placed in the midst of a false membrane, almost opaque; and lastly, in another remarkable case, the same matter was found in the great epiploon, and in the mesocolon.

Of the brain, and its membranes.—The lesions of these parts observed by our author, which are peculiar to phthisis, are hydatids and tubercles; though he afterwards qualifies this assertion respecting hydatids. The following case is interesting:—

“A stone-cutter, forty-four years of age, of a hardy constitution, sober, industrious, and seldom subject to illness, became affected, within the last three years, with a complaint in the throat, lasting from twenty-four to thirty-six hours; and with a diarrhœa, which had lasted still longer, and which came on from month to month, lasting a day or two, but without pain. Six months prior to his admission into the hospital, he was seized on a sudden, without any known cause, and without cough, with a vomiting of blood, which he supposed amounted to two pints; and, some days after, he passed a considerable quantity by stool. In consequence of these losses of blood, he had kept his bed for several days, and had not worked for three months. Cough and expectoration commenced from the time of the vomiting of blood; cold chills, followed by heats and sweating, had become established for the last two months, and the respiration had been affected for the same length of time; the appetite had diminished, but the thirst was considerable. He had neither experienced pain nor diarrhœa.

The 26th November, 1822, the day after his admission into the hospital, he appeared rather feeble, without headache; intellects clear, respiration tranquil; pectoriloquism imperfect between the vertebral column and scapulæ; respiration hard and laborious in the same points, but natural elsewhere. Cough not very frequent, expectoration round and in balls, opaque, united by a viscid phlegm. Some pricking pains in the lateral parts of the chest. A hoarse, broken voice; a feeling as if the larynx was torn, whilst coughing or swallowing. The heat natural; pulse quiet, regular, and under seventy

pulsations in the minute; very little thirst, deglutition imperfect, although the pharynx and tonsils appeared natural; the belly indolent.*

The following month, the state of the patient appeared to be somewhat ameliorated. He felt no cold chills; nevertheless, at times the aphonia was complete. The appetite also mended.

From the 24th of December to the 31st of January, the patient preserved his intellectual faculties; slept but little; had no headache; and lost his strength slowly. The aphonia was variable. A constant pain about the thyroid cartilage, accompanied with heat, especially in the night. Deglutition of the saliva troublesome. The cough and oppression increased during the last ten days of the month of January; but were a little less after the 15th, and the expectoration became thicker. At the same time there was a severe pain on a level with the left breast, but without any alteration in the sound of that part. The respiration was tracheal, accompanied by a gurgling noise (*gorgouillement*) under the left clavicle, for the extent of five inches: it was the same in the corresponding point behind, but of a less considerable extent. There was also a little mucous rattle on the right side. The pulse continued to be as slow as usual; the chills appeared again in the evening, followed by heat and sweat.

From the 26th to the 28th December, violent colics took place, followed by diarrhoea, and which continued more or less throughout the month of January. The appetite failed, from the appearance of the diarrhoea.

On the 31st, the weakness suddenly became considerable; his face very pale. He complained of a very troublesome feeling of weakness at the epigastrium; the breast gave no sound under the left clavicle, for the extent of three inches. The expectorations resembled a greyish and greenish pus, were marked with red. The pulse was calm and regular. There was some delirium in the night; and at three o'clock the next morning the patient died.

Examination of the body, twenty-nine hours after death.—Nothing remarkable in the external condition. In the head, the dura mater adhered very firmly to the sagittal suture; there was no infiltration under the arachnoid. At the upper part and sides of the brain, below the pia mater, about twenty vesicles were seen, that extended beyond the convolutions about a line or a line and a half; the rest was buried in the cerebral substance, which was perfectly healthy around them. These vesicles were of a round form, and of various dimensions: three of them were the size of a nut, uniform on the surface, and presented a kind of pedicle, from which a white and opaque membrane arose, and which did not cover the hydatid throughout its whole extent. The brain was very vascular; the lateral ventricles, the cerebellum, &c. in a healthy state.—In the neck, the mucous membrane of the laryngeal face of the epiglottis was destroyed the whole of its height; the borders of the ulceration were a little thickened, hard, and white; its base was unequal, and of a reddish colour. Two small ulcerations above the chordæ vocales: that of the right side was nearly destroyed; the circumference

* We omit the treatment, as wholly unworthy of insertion.—EDITORS.

greyish, hard, and lardaceous. The mucous membrane of the trachea red, and a little thickened inferiorly; that of the bronchiæ still more red; both, however, without ulcerations.—In the chest, on the left side, rather less than a pint of reddish serum, in the midst of a false membrane which lined the lung. The diaphragmatic and costal pleuræ were of a deep red, and were half a line in thickness. At the top of the upper lobe of the lungs was found a large excavation, lined with a semi-cartilaginous false membrane. On the sound lungs were some tubercles, or little masses of melanosis: throughout the rest of its extent there were many little cavities, for the most part but incompletely emptied. The inferior lobe contained a considerable number of grey granulations, without tubercular matter or excavations. On the right side the lesions were the same, though not quite to so great an extent. The aorta, below the origin of the cœliac artery, presented some cartilaginous and bony patches. The mucous membrane of the stomach was red in some spots, and a little softened at the great curvature. On the left of the cardia there was an ulcer, half an inch in diameter, the borders of which were irregular. The mucous membrane of the small intestines was perfectly sound, excepting two small ulcerations, which presented some semi-transparent miliary tubercles on their surface. The mucous membrane of the large intestines was as soft as mucus, and of a violet red in several points in the rectum; there were ten small sub-mucous abscesses, of the size of a pea, and eight ulcerations, of the same size. The spleen was also softened."

Excepting the hydatids, all the other lesions of the above case had given rise to symptoms proper to each of them.

The relation of another long and interesting case next follows; the most remarkable circumstance attending which was the simultaneous existence of tubercles in a number of different parts,—the lungs, neck, axilla, mesentery, loins, and spleen; and especially the equal state of their development in all these parts, excepting the lungs.

M. Louis finishes the pathological part of his work with a recapitulation of the principal facts recorded therein.

MEDICAL AND PHYSICAL INTELLIGENCE.

PATHOLOGY.

1. *Hydrophobia*.—IN a Memoir lately presented to the Academy, by M. NAUDIN, of Toulouse, a case of Hydrophobia is related. It appears that six persons were bitten by a dog not supposed to be rabid, and consequently no precautions were taken: forty-eight days afterwards, symptoms of hydrophobia appeared in one of the persons bitten, and death ensued in two days. The pustules described by Marochetti *were not discovered*, but the sublingual glands were in a state of inflammation, and they were cauterised without success. The other five persons had experienced no inconvenience at the time this account was given, one month after the death of the above patient. (*Archives Generales*, Decembre.)

2. *Case of Enlargement of the Mammæ*.—M. DELFIX, of Morlais, has published a paper in the Journal of Physiology, on the use of Hydriodate of Potash, from which we extract the following case:—

Maria Ahaure, residing in the Lower Pyrennees, thirty years of age, of a lymphatic temperament, consulted him, in the year 1821, for a venereal affection. The use of mercurial frictions soon restored her to health. Two years afterwards, she again consulted the Doctor for a similar disease, and also on account of her breasts, which were enlarged: they were three times their natural size. The liquor of VAN SWIETEN (solution of corrosive sublimate,) was prescribed, which, with other means, produced a diminution of all the syphilitic symptoms, but the mammæ still continued to increase. This augmentation was considered to be a venereal symptom, and mercurial frictions were employed under the arms, until an ounce of the ointment was used; but, instead of procuring any amendment, the breasts continued to increase to a most extraordinary degree. When the patient was sitting, they rested upon her thighs; they could be joined together behind her back; the nipples were like hen's eggs. The patient, however, experienced no pain, and the skin retained both its suppleness and colour. Unknown to Dr. Delfiz, a surgeon had plunged his bistoury deeply into this mass, in the expectation of evacuating pus; but only a few drops of blood followed the incision. The patient declared that she scarcely felt this operation. At this period she had miscarried, in the fifth month of her pregnancy.

Recollecting the good effects of the hydriodate of potass in bronchocele, as well as that it had been found useful in some presumed syphilitic swellings, the Doctor determined upon making trial of it. In consequence, frictions with half an ounce of the pommade, made according to the formulary of M. MAGENDIE, were recommended; emollient fomentations being employed at the same time. No accident occurred; and this treatment was continued for a month and a half. At the end of this time, the breasts were much diminished in size. After an intermission of fifteen days, the pommade was again had recourse to, and

employed for three months, the frictions being repeated less frequently; otherwise, the patient complained of headache. The result was, that the breasts were reduced to about twice their natural size: they were flaccid; and the woman was able to undergo severe labour. (*Journal de Physiologie*, Octobre.)

3. *Necrosis*.—Dr. RICHTER, of Berlin, has lately published some long and interesting papers upon the subject of the various kinds of Necrosis. We abstract the following observations, which may not be uninteresting to our readers.

Necrosis syphilitica.—This species begins mostly in the substance of the bones, and extends lengthways. The pain (which may last for a considerable time) is of a boring, gnawing kind, and increases when the patient is warm in bed. At this time, indeed, it frequently is so severe, that he is obliged to rise. The swelling gradually increases, but does not acquire the size which is witnessed when the disease arises from other causes. The inflammatory process is slowly developed, never very acute, and does not extend beyond the part of the limb which has been previously swollen. The redness is of a pale rose-colour, very limited, well defined, and not gradually lost in the surrounding parts. The temperature of the part is not high. The pain arising from inflammation of the soft part is more superficial and lancinating, and may be distinguished, by intelligent patients, from the boring, gradual, and deeper-seated pain, which is characteristic of this form of necrosis. The swelling of the limb is but little increased when inflammation of the skin supervenes, and every symptom is increased when the patient is warm in bed. Some time elapses before an opening takes place in the skin; and, before the small portion of skin is absorbed, it assumes a limited dark appearance. Subsequently, the skin in the neighbourhood of this opening is more destroyed than the cellular membrane beneath. When necrosis arises from other causes, the latter structure is most affected. Around the opening small superficial ulcerations form, which take on all the characters of chancres. The matter, which is from the commencement discharged from these openings in the skin, differs much from the qualities of healthy pus, particularly if the patient has been long affected with syphilis, and is of a cachectic habit of body.

Necrosis arthritica occurs only in advanced age. It arises either suddenly or gradually, and may show itself, at first, either upon the surface, or the periosteum, or the joints, of the bones themselves. Its course is rapid, if the subject is of a full plethoric habit of body. The paroxysm of gout is, probably, suddenly suppressed. In patients of a different constitution, it proceeds more slowly. The pain is acute, and seldom felt in the middle of the bones, but more superficially upon the periosteum, and affects the whole circumference of the limb equally. In this species, warmth is borne without any aggravation of the symptoms; but, towards midnight, there is generally an exacerbation, the severity of which passes off in the morning. Upon any approaching change of weather, the pain is much increased. The swelling quickly follows the pain, and soon becomes considerable, as the inflammation begins mostly in the soft parts, and subsequently extends to the bones.

The inflammation sometimes takes place at the same time with the swelling, and extends to the same distance. The redness is darker than that observed in the preceding species, and less diffused; but still gradually vanishes towards the edges. The sensibility of the inflamed part is often so considerable, that the slightest covering cannot be borne. The fistulous openings are small, and the edges easily become callous. The fluid at first discharged is thin and watery, and excoriates the adjacent parts: it sometimes, under circumstances of a favourable nature, becomes of a better quality.

Necrosis scrofulosa takes place, in most cases, during the period of growth, in those subjects who are of a generally scrofulous habit. It arises and proceeds very gradually, and may last for years, affecting at the same time several bones. The pains, at the commencement, are moderate, and observe no regular course: they are not increased when the patient is warm in bed, nor by vicissitudes of weather. The swelling also takes place very slowly, but extends over the whole of the affected parts; perhaps occupies all the limb, the under part being œdematous. It becomes gradually larger, and is not tense and hard, but remains of a doughy feel. In this state it may remain, the pain continuing for some time before inflammation supervenes. At last inflammation does take place, but does not rise to a high degree; the part appearing of a pale rose-colour, as in the syphilitic species: it is more diffused, however. When the disease is of long duration, and a great part of the bone is destroyed, the colour of the inflamed part becomes of a bluish cast, and darker. It is still distinguished by its asthenic character, by the swelling of the part, which remains doughy, and retains the impression of a finger. The fistulous openings possess the peculiarity of easily healing, and again breaking out; or the passage to the destroyed portion of bone is closed up by fungous growths, which shoot from the openings. The matter at first discharged has the colour and consistence of good pus, but is often mixt with shreds resembling the coagulated white of an egg. The pains frequently abate entirely after the swelling has broken.

Necrosis scorbutica. — Besides the general symptoms of weakness and broken health, those which refer to the state of the bone are marked by the following peculiarities:—This species frequently supervenes upon other diseases of the bones; and, long before any destruction of the bone occurs, pain and other symptoms take place. The swelling is violent, and becomes œdematous, and is not for some time accompanied by inflammation; which at last, however, occurs very rapidly. The blush of colour is dark, bluish, and gradually lost in the surrounding parts. The sensibility of the parts, and the temperature, are not so highly increased as in the nervous inflammation. The fistulous openings form rapidly, become large, and approach each other. The sinuses are thin and flaccid, and are disposed to mortify. The matter poured out when the swelling bursts is thin, watery, brown in colour, and mingled with blood: it at last, perhaps, assumes a more favourable appearance. At the edges of the openings, light bleeding fungi form, which increase in size, and obstruct the exit of the contained matter. The contiguous veins are much increased in size.

Necrosis mercurialis resembles very nearly the scorbutic species. It runs a tedious and unfavourable course. The general symptoms of the mercurial poison give the clearest indication of the nature of the malady.

Necrosis metastatica.—The soft parts surrounding the bones are usually first attacked in this species. The affection of the bones is secondary and sympathetic. The symptoms resulting from a metastatic affection, whether the hard or soft parts are affected, are sudden in occurrence, and rapid in their progress. Pain precedes the other symptoms but a short time: almost along with it arise swelling, inflammation, and abscesses; so that in a few days, or perhaps in a few hours, a portion of destroyed bone may be detected with a probe. The pain occurs suddenly, is very violent, darting, and constant. The swelling is considerable; increases rapidly when the soft parts are primarily affected, and more slowly when the substance of the bones is the seat of the evil. The metastatic inflammation is always limited, violent, and very painful. The redness of a deep tint; the temperature high. The abscess forms, and ruptures speedily. When the muscles and cellular membrane are at first attacked, one opening only is usually formed, and not several at distant points; which occurs more frequently during the development of the disease in the bony structure. The pus discharged is of a bad quality, brown, bloody, of a blackish colour, and thin.

Necrosis a causa mechanica.—The cause of this species depends upon the degree of violence inflicted. The progress is generally rapid. The symptoms are violent; and therefore correspond, to a certain degree, with those above described. The nature of the inflammation, and the result of the case, depend almost entirely upon the constitution of the patient. (*Journal für Chirurgie, &c.* von GRAEFE und WALTHER.)

We may, in a subsequent Number, abstract a few more observations from the excellent papers of RICHTER, upon the subject of Necrosis. A continuation of them is promised; and we shall, of course, submit to our readers the treatment proposed by this eminent surgeon in this formidable disease.

THERAPEUTICS.

4. *Neuralgia of the Sciatic Nerve*.—M. REVEILLÉ PARISE has published a paper on the above complaint, in which, after detailing some ineffectual trials with the oil of turpentine, he declares his belief that the method of cure recommended by the celebrated COTUGNO, is the only one to be relied upon. To illustrate his meaning, he relates several cases; of one or two of which we here give a sketch. Our own impression, however, being that they were rheumatic affections, and not neuralgia, properly so called.

M. D—, fifty-two years of age, was attacked, without any apparent cause, with sciatica in the limb of the right side, which was for a short time relieved by leeches and rest; but, on resuming his occupation, the pains returned to such a degree, as to render his limb nearly useless. The oil of turpentine was then administered, first in the dose of one drachm a-day, afterwards gradually augmented to three drachms in the

day. At first, this medicine seemed to have a beneficial effect; but, when the patient began to exercise the limb, the pain returned with great severity. Our author then applied a large blister to the outer and lower part of the knee, upon the head of the fibula. It was only after a lapse of eight days, that a marked amendment was perceptible; by the twentieth day, the patient was entirely cured, and has remained so. It is to be observed, that costiveness is asserted always to attend this complaint, and that no curative measures will be available unless this state of the bowels be obviated.

M. L—, fifty-seven years of age, was seized with sciatica, in consequence of sitting upon a cold stone seat, in the month of April, 1825. Cupping and repose, with laxatives, effected a cure in about a fortnight. Three months afterwards, in consequence of bathing, M. L— was again attacked with the disease in a very violent degree: the means before resorted to were again tried, but without any good effect. The oil of turpentine, administered to the extent of from three to four drachms a-day, produced but little relief, and brought on a sensation of heat at the epigastrium, and colic. The blister was then applied in the same situation as in the preceding case, and kept moderately open for thirty-two days, when the cure was completed.

From these cases our author draws the following conclusions:—

1st. That the Cotugno method is the most efficacious for the cure of sciatica, especially when it is chronic.

2d. That the suppuration of the blisters or moxas should be kept up for a considerable time.

3d. That, nevertheless, all irritating applications to the ulcers made by the blisters, should be avoided.

4th. That a laxity of the bowels is a necessary condition in the cure of this species of neuralgia; and,

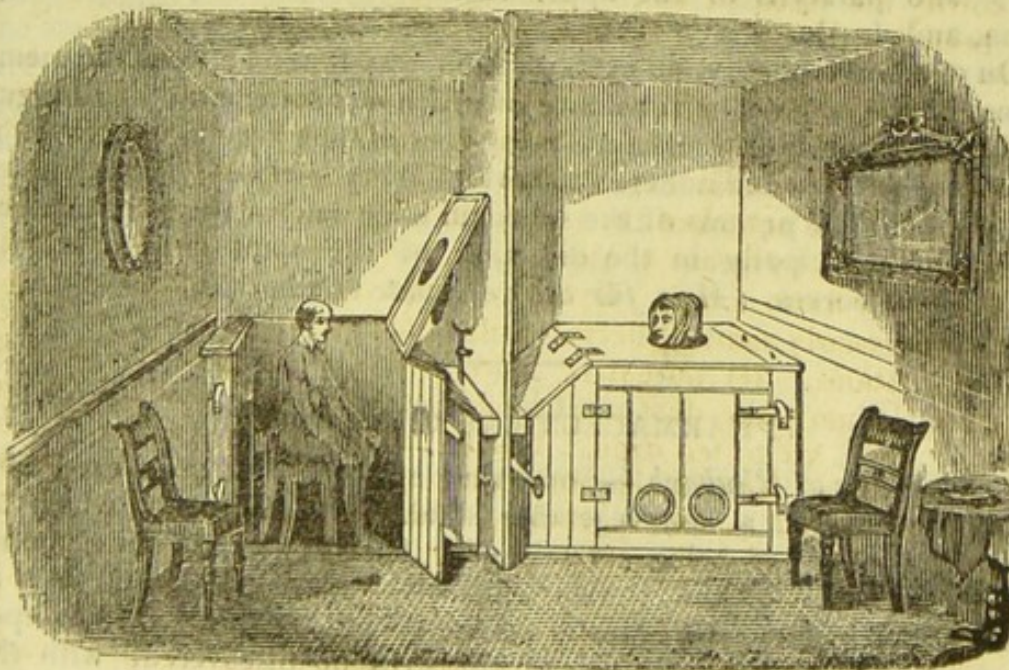
5th. That, in order to avoid relapses, every means must be employed to fortify the diseased limb. Among these means are frictions, baths of heated sand, &c. (*Archives Generales*, Decembre.)

5. *Further Observations on the Oil of Euphorbia Lathyris.*—M. BALLY, at a late sitting of the Royal Academy of Medicine, gave an account of several experiments made by him, at the Hospital la Pitié, upon the action of the above oil. That which he employed had been extracted by means of alcohol, or by expression: this last appeared to be rather more active. Given to fifteen persons of different ages, it produced nearly similar effects; neither did it cause any great number of evacuations. Its purgative power is much inferior to that of the croton tiglium; the dose must be at least doubled, and may be extended from six to ten drops: it has, besides, the defect of exciting vomiting. On the other hand, it does not possess the power of producing salivation, as the croton oil does. M. Bally still, upon the whole, considers it as a useful purgative, and especially for children. It ought to be fresh. (*Ibid.*)

6. *On Fumigation.*—As the practice of using fumigations, in a variety of complaints, is one of growing utility, we have given a sectional or divided

view of two Fumigating Baths, as constructed at Mr. GREEN's establishment for their administration. This view will convey a more distinct idea to many of our country readers, of the nature of a fumigation, than a mere description. The wooden box, represented in the plate, being a very imperfect conductor of heat, is capable of having its temperature increased inside to the degree required for the fumigation,—viz. from 100 to 130° of Fahrenheit; which is occasioned by the construction of the furnace, and hot plates situated beneath the box and under the feet of the patient. On one of these hot plates of iron, the medicine intended for the fumigation is volatilised, and the gas rising surrounds the patient's body, which is previously, (by sitting in this increased temperature eight or ten minutes,) brought to a state favourable to receive the medical agency of the gases produced; as the absorbent system, together with all the functions of the body, are urged into activity by the increased temperature to which the patient is subjected.

Of these gaseous fumigations, we, without hesitation, affirm that they are of the greatest benefit in various disorders of the skin, in cases of indolent ulceration on the surface, and in syphilitic cachexies. On the other hand, in cases of weakened or irregular circulation, in obstruction of the liver, glands, or other viscera, we think equal good is derived by the simple immersion of the patient's body in the heated bath, independently of the gases; for, as this process calls into action the whole of the circulating fluids, it is reasonable to infer that an agent of this nature is a manifest improvement to our therapeutic efforts. At all events, it is an addition that has proved its own recommendation, and does not militate or interfere with our other curative means. In leucophlegmatic habits, likewise, and in the languid circulation of elderly people, this is a remedy that may be beneficially adopted. (*From a Correspondent.*)



SURGERY.

7. *Blennorrhagia, (Gonorrhœa.)*—MM. CULLERIER, the nephew, and LAGNEAC, made a Report to the Academy upon a Memoir by M. TARBES, of Toulouse, relative to the means proper to be employed for the purpose of re-establishing the above discharge, when suddenly suppressed. M. Tarbes relates four cases: in the three first, the discharge from the urethra was restored by inoculation of the gonorrhœal matter, in order to overcome in the one case an ophthalmia, and in the two others a swelled testicle. The fourth case relates to an inflammation of the right testicle, produced by the same causes, and which gave way as soon as the discharge was brought back by ammoniacal injections. The reporters appear to think that the inoculation of the matter has no advantage over the mere mechanical irritation of a bougie, or an injection; and they are, moreover, of opinion that, in many instances, the suppression of the discharge, instead of a cause, is really an effect of the new disease. (*Archives Generales*, Decembre.)

8. *Extirpation of the Eye.*—A fungous tumor having developed itself in the right orbit of a girl, seven years of age, who had never shown any previous signs of disease, increased regularly, but without pain, headache, or vomiting, until the eye was pushed out of its natural situation. On the ninth week of the disease, the eye, as well as the fungus, was removed. One month after the operation, a fungous excrescence formed in the orbit, which bled a good deal: after it was removed, it was discovered to be a portion of the cortical substance of the brain. On the succeeding days, violent inflammation of the encephalon, with delirium and obstinate vomiting, came on. A few days afterwards, a fresh excrescence appeared, and increased to such a size as to touch the lips. The same appearances next took place in the left eye; and paralysis of the upper extremities occurred, followed by coma, and death.

On opening the body, an extravasation was found between the membranes of the brain, the substance of which was softened. The fungus in the orbit was flaccid and fetid: the root of this vegetation was of a cancerous nature, and adhered to several bony surfaces; for example, to the pterygoid process of the sphenoid bone and to the sella turcica, extending principally in the direction of the ramifications of the fifth pair of nerves. (*Mag. für die gesammte Heilkunde.*)

PHARMACEUTICAL CHEMISTRY.

9. *Analysis of Rhubarb.*—Some time ago, M. NANI believed that he had discovered a new vegetable alkali in rhubarb, and which he said was capable of being crystallised. M. CAVENTOU has repeated the experiments of the Italian chemist, and regards them as, in various particulars, inaccurate. On examining into the composition of the alcoholic extract of rhubarb, he discovered, with the assistance of alcohol and ether, sometimes separate, at others combined,

a fatty matter, containing a little odoriferous volatile oil, and a yellow colouring principle, capable of crystallisation, and of being sublimed without decomposition, and which (being in rhubarb what pepperin is in pepper, or gentianin in gentian,) may be called *rhubarbin*. Besides this, there exists in the extract a brown substance, insoluble in water in its state of purity, but which, when combined with rhubarbin, acquires the property of dissolving, and forms a composition, which is the *caphopicrite* of some chemists, and the *rhubarbine* of PSAFF. From this fact, which bears an analogy with that which is found in many other extracts,—for example, in that of the Campeachy wood, where the hematine is united to another principle; or that of the gentian, where the gentianin is combined with a glutinous matter,—M. Caventou concludes that, among vegetable substances, one acts the part of an acid, the other that of an alkali; and that they produce, by their mixture, compounds which assimilate in many respects to saline substances. (*Archives Generales*, November.)

10. *Necessity of Water in the Preparation of Lead-Plaster.*—Attempting to form the lead-plaster, the Emplastrum Plumbi of the Pharmacopœiæ, without the use of water, steam being the source of heat, I was surprised to find, after several hours, during which time the litharge and oil had been kept at a temperature of 220° , or thereabout, and constantly stirred, not the slightest appearance of combination. Upon the addition of a small quantity of boiling water, the oil and oxide immediately saponified: water appeared, therefore, to be essential to the formation of the plaster. It also appeared probable the oxide might be in the state of hydrate. To ascertain if such were the case, I precipitated, by potash, the oxide from a quantity of acetate. The precipitate, when washed, was dried by a heat of 220° , until it ceased to lose weight. One hundred grains, heated to redness in a tube, gave off nearly eight grains of water, and assumed the orange-colour of litharge. The recently precipitated oxide was, no doubt, therefore, an hydrate; part of which, with somewhat less than two parts of olive-oil, without any addition of water, at a temperature of 212° , formed in half an hour perfect plaster. Each of these experiments has been repeated with precisely the same results. I am induced to mention this fact, because all pharmaceutical writers limit the action of the water to that of keeping down the temperature.—H. H. (*Journal of Science*.)

MISCELLANEOUS.

11. *Medical, Clerical, and General Life Assurance Society.*—No apology, we apprehend, will be deemed requisite, on our part, for introducing to the notice of such of our readers as may not yet be aware of its existence, some account of an Institution which professes to have for its object the welfare and security of two large classes of the community—the members of the clerical profession, and of our own.

We may, perhaps, be allowed to remark, that our motives in doing so

are quite disinterested, as we are not, in any way, personally connected with the undertaking; and further that, in calling to it the attention of our professional brethren, our object is not to invite them to speculation, the *capital* of the Society being already subscribed for, and invested.

The plan of forming a new Life Assurance Company, which should have a more direct reference, than any one previously existing, to the interests of the Medical Profession, was set on foot early in the year 1824, by some eminent practitioners in the metropolis.

These gentlemen, in the progress of their labours, were induced to invite the co-operation of the Clergy; and the zeal and cordiality with which their views were seconded by that learned body, furnished a gratifying proof how highly they appreciated the advantages likely to accrue from the proposed measure.

Under these auspices, the Society was organised, and commenced business in the month of June in the above-mentioned year; and it has, since that period, steadily advanced in character and prosperity.

In confirmation of this statement, we may subjoin an extract from the Report, made to the proprietors, by the Board of Directors, in December last, which is now lying before us:—

“ In meeting the friends and early patrons of the Society on the present occasion, the Board of Directors has great satisfaction in being able to state, for their information, that, since the last General Court, the affairs of the Institution have proceeded with a steady and growing prosperity. At that period it was remarked, that the increasing business of the Society warranted the expectation of a progressive improvement; and, perhaps, the most acceptable intelligence that can be now conveyed to the proprietors, will be found in the confirmation of this anticipated result. The business still increases, and the prospect of great ultimate success is more and more favourable. The high respectability of character which the Society has attained, and the peculiar advantages which it possesses, are daily fixing themselves with augmented stability in the public mind.

“ It will be satisfactory to the General Court of Proprietors to learn that the shares of the Society appear to be in the hands of permanent holders. Notwithstanding the privilege granted by a former General Court, of reserving five hundred to be placed at the discretion of the Directors, *not a single share* has been so reserved in the office. All of them have been not only distributed, but actually paid for; and they are held by *bona fide* subscribers, as is demonstrated by the fact that no share has hitherto been sold, or even exposed for sale in the market.

“ The value of the shares is now increased by the interest that is due upon them; and also by the surplus of the premiums, which is already accumulating, and which the Directors have just cause to hope will, in a reasonable time, form a capital adequate to all the purposes of the Institution, without requiring any additional call upon the proprietors.”

It is to the general principle of life assurance, and to the advantageous mode of securing property which is offered to the public by Societies of this kind, that we would wish, upon the present occasion, more particularly to direct the attention of our readers. And it would be difficult,

we conceive, to point out, among the improvements which distinguish the civil polity of modern times, any one which has contributed more essentially to the welfare of the community at large, or which has tended to lessen, in a greater degree, the sum of human misery, than the introduction of these establishments.

Yet, widely as their benefits have been diffused, if there be one class of individuals to which, more than another, they may be made availing, it is that composed of *members of the several professions*, whose incomes, the tardy and uncertain reward of anxious, persevering toil, too often cease with the lives of their possessors; while their wives and children, from the refinements of education, and from the sphere of society in which they move, are ill calculated to meet the pressure of adversity.

But, that the practice of life assurance, which affords, of all others, the easiest and most economical method of providing against the contingency to which we have alluded, has not hitherto been duly appreciated,—that, in too many instances, its advantages have been overlooked and neglected,—we have abundant and melancholy proof, not only in the existence of various charities for the relief of the widows and orphans of clergymen and medical men, but likewise in the well-known fact that the premature death, even of men holding a high and distinguished professional rank, has too frequently, from the want of this salutary foresight, plunged their families suddenly, from a state of affluence and all the enjoyments of luxury, into a condition of hopeless poverty and destitution.

Before we take leave of the subject, we may mention, for the information of such of our readers as may not have seen the Prospectus of the “Medical and Clerical Life Assurance Society,” that the medical gentlemen officially connected with that Institution are Sir Henry Hallford, Sir Astley Cooper, Sir Everard Home, Dr. Bree, Dr. Cholmeley, Dr. Pinckard, Dr. Merriman, Dr. Sutherland, Dr. Ashby Smith, Mr. Earle, Mr. Vance, Mr. Davis, and Mr. Stevenson;—among their clerical coadjutors, we observe the names of several bishops, and other dignitaries of the church.

MONTHLY CATALOGUE OF MEDICAL BOOKS.

* * It having been hinted to us that gentlemen, sending copies of their Works, prefer having their titles given at length, it is our intention, in future, to comply with this suggestion: but it is to be observed, that no books can be entered on this List except those sent to us for the purpose;—finding, in the lists hitherto transmitted, that the names of works have frequently been given as published, which have not appeared for weeks, or even months, after.

Medical and Surgical Cases; selected during a Practice of thirty-nine Years. By EDWARD SUTLEFFE, Queen-street, London. Vol. II.—London, 1825.

A Picturesque and Topographical Account of Cheltenham, and its Vicinity. By the Rev. T. D. FOSBROKE, M.A. F.A.S. Honorary Associate of the Royal Society of Literature, Honorary Member of the Bristol Philosophical Institution; Author of the Encyclopedia of Antiquities, British Monachism, the History of Gloucestershire, the Wye Tour, &c. To which are added, Contributions towards the Medical Topography, including the Medical History of the Waters. By JOHN FOSBROKE, Resident Surgeon at Cheltenham.—Cheltenham, 1826.

METEOROLOGICAL JOURNAL,

From January 20, to February 19, 1826, inclusive.

By MESSRS. WILLIAM HARRIS and Co. Mathematical Instrument Makers,
50, Holborn, London.

	MOON.	Rain gauge.	THERM.			BAROM.		DE LUC'S HYG.		WIND.		ATMOSPHERIC VARIATIONS.		
			6 A.M.	MAX.	MIN.	9 A.M.	10 P.M.	9 A.M.	10 P.M.	9 A.M.	10 P.M.	9 A.M.	2 P.M.	10 P.M.
Jan.														
20			37	40	39	30.17	30.18	89	80	NNW	NNW	Fine	Fine	Fine
21			40	41	34	30.05	30.01	82	83	SW	W			Foggy
22			35	40	31	30.09	30.06	93	95	WSW	W	Foggy		
23	○		36	40	34	30.06	30.10	95	95	W	NNE			
24			35	37	34	30.28	30.30	96	93	NE	SW	Fair		
25			36	37	34	30.20	30.16	83	93	SE	E	Fine		Sl. Fog
26			36	37	29	30.19	30.17	83	97	E	ESE			Fine
27			51	35	32	30.14	30.14	92	89	E	SE	Foggy		Foggy
28			36	37	35	30.01	30.04	85	89	SW	ESE	Fine		
29			39	45	37	29.98	29.81	85	82	SSE	S			Fine
30	☾		42	47	42	29.67	29.60	89	85	SSE	SW			S. Rain
31		.4	45	47	40	29.64	29.66	82	86	SW	SW			Fine
Feb.														
1			46	47	43	29.72	29.72	86	86	E	SSW	Foggy		Foggy
2			47	50	46	29.73	29.73	85	83	SW	SSW	Fair		Fine
3		.4	50	52	43	29.55	29.54	74	84	SW va.	SW	Fine		S. Rain
4			45	47	42	29.76	29.75	80	81	SW	SSW			Cloud.
5			50	50	45	29.75	29.65	72	78	SW	SW			S. Rain
6	●	.12	50	54	43	29.45	29.65	82	77	SW	SW	Rain	Rain	Fine
7			45	48	36	29.83	30.14	72	70	W	WSW	Fine		
8			39	46	35	30.22	30.19	82	74	SSW	SSW		Fine	
9			38	42	30	30.14	30.11	84	86	S	SE			
10			31	36	34	30.09	30.06	89	80	E	SE	Foggy		
11			36	40	38	30.01	29.93	76	86	S	SSE	Fine		
12			45	47	40	29.92	30.02	79	87	SSW	SW			
13			41	47	41	30.02	29.84	88	78	SW	S	Foggy		
14		.15	44	45	44	29.80	29.84	85	88	SSW	SSE	Rain	Rain	Rain
15	☽		45	51	45	29.81	29.67	88	72	S	S	Fair	Fine	Fine
16			46	50	43	29.60	29.57	85	80	SSW	SSW			
17			46	47	35	29.37	29.44	80	78	SSW	SW			
18		.20	37	47	37	29.64	29.75	80	80	SW	SSW	Rain	Fair	
19			45	52	43	29.41	29.41	85	87	SW	WSW	S. Rain		Rain

NOTICE TO CORRESPONDENTS.

Dr. STOKER's Paper has been unavoidably postponed till the present Number: we shall be happy to receive the continuation.

Mr. RICHMOND's Papers in our next.

Mr. OSWALD's packet has been received.

☞ Correspondents are respectfully informed that, when their Communications appear to the Editors not to be consistent with the objects of this Journal, they are left in the hands of the Publisher; by application to whom, they may be obtained.

THE LONDON
Medical and Physical Journal.

NO 4 OF VOL. LV.]

APRIL, 1826.

[NO 326.]

For many fortunate discoveries in medicine, and for the detection of numerous errors, the world is indebted to the rapid circulation of Monthly Journals; and there never existed any work, to which the Faculty, in Europe and America, were under deeper obligations, than to the Medical and Physical Journal of London, now forming a long, but an invaluable, series.—RUSH.

ORIGINAL COMMUNICATIONS,
SELECT OBSERVATIONS, &c.

ART. I.—*Case of Popliteal Aneurism.* By JAMES M. ARNOTT,
Esq. Surgeon.

THE following case is recorded, not from there having been any thing peculiar in the aneurism of the ham, or in the operation for its cure, but from the circumstances under which the patient's death subsequently took place, at a short distance of time after his recovery, and from the appearances presented on dissection of the body.

On the 20th of October last, I was requested to visit John Williams, æt. thirty-four, a brickmaker, on account of a swelling in the left ham, which impeded the use of the limb, and prevented him following his occupation. On examination, the hollow between the ham-strings was found occupied and distended by a large tumor, which felt firm but semi-elastic, yielded little to pressure, but pulsated freely; and the pulsations of which were stopped by compression of the femoral artery in the groin, but recurred immediately on this pressure being removed.

A swelling had been first perceived in this situation in the preceding month of June, on his leaving an hospital into which he had gone for rheumatism, and where pains in the left knee having been treated without success as rheumatic, he had been led, on his coming out, to consult a private practitioner, who discovered a swelling in the ham, and referred to it as the cause of the pains. Since then the man had continued at his work of brickmaking, the tumor gradually augmenting in size, and with increased inconvenience to the motions of the joint, until within a few days of my seeing him, when the severity of the pain, and the inability of extending and resting firmly on the limb, compelled him to give up work, and induced him to resort for advice and assistance to Mr. Barrack, of Gower-street, North, by whom I had been asked to see the case. He could assign

no cause for his complaint. The bones of the leg had been fractured some years before.

On tracing the course of the large arteries of the body, no other aneurismal tumor could be discovered. The pulsations of the heart, carefully examined, communicated no other impression than that of health: like those of the artery at the wrist, they were regular and equable, of natural frequency and strength. The patient's health was good, and his constitution apparently sound. The nature of his complaint was therefore explained to him; and he was informed that it was only to be remedied by an operation, a favourable issue of which, from the circumstances of his case, might fairly be anticipated. He was further recommended, on account of his circumstances and inconvenient situation, to go into an hospital, but he objected to this; and, having satisfied myself that his habits were temperate, his disposition tranquil, and that his wife was capable of making a prudent and a careful nurse, I undertook to perform the operation for him at his own house.

Accordingly, on the 28th of October, it was performed in the usual manner; with this difference only, that, in consequence of the small size of the room, the operation was performed upon the patient as he lay in bed, the surgeon kneeling at the bedside whilst executing it. The artery was tied in the upper third of the thigh, before it gets beneath the sartorius muscle. A single middle-sized thread of dentist's silk was used as a ligature, which was carried round the vessel with as little separation of it as possible from its surrounding connexions, and merely such as was effected by the passage of the aneurism needle. The pulsations in the tumor stopped immediately on tying the ligature, and did not recur. The subsequent progress of the case was favourable; the wound healed in a fortnight, except at the point where the ligature was situated, which came away on the 29th of November, the thirty-first day after the operation, and the wound then closed. The tumor in the ham had now diminished one-half in size, and the patient began to move about and make use of his limb.

Six weeks after this, and nearly twelve subsequent to the operation, Williams, who had been going about, but had not yet returned to his regular employment, died suddenly, under the following circumstances. He had been sitting in his own room with a friend, on the evening of the 18th of January, having had his share of a pot of beer; which, however, was all he had taken that day. His friend went out to fetch some tobacco; and, as he had only to go the distance of a few doors, and was not detained in the shop, the quantity he required being kept ready made up, he was not absent more than three minutes. On his return, he found Williams, whom he left

sitting by the fire, lying dead within the fender, and the clothes over the left shoulder, which was within a few inches of the grate, burning. It was afterwards ascertained that the integuments of this part were but slightly scorched. On raising him up, he was found to be lifeless, and was pronounced by a surgeon, who saw him in a few minutes afterwards, to be quite dead. It would appear probable, from the position in which the body was found, that, as soon as his friend had left the room, Williams had got up to reach some coals, which were on the opposite side of the fire-place; and that, in this attempt, he had sunk down within the fender, in the position already described.

On opening the body, the pericardium was found to be distended with blood; separated, however, into coagulum and serum. On removing this, the heart itself was examined, which led to the discovery of a small aneurismal swelling of that portion of the aorta which is included within the pericardium, and where it is still covered by fat, continuous with that of the heart. This swelling was not very prominent, and was similar in size, and somewhat in shape, to that of half of a small walnut. A spot, the size of a split pea, on the surface of the swelling, was of a dark colour, owing to the thinness of the parietes at this place; and in the centre of this spot was a minute aperture, barely sufficient to admit the point of the blow-pipe, through which the blood had proceeded, which, filling the cavity of the pericardium, and oppressing the action of the heart, had produced the patient's immediate death.

The limb which had been the subject of operation was next examined, and the artery removed, from the groin to below what remained of the aneurismal tumor. The ligature had been thrown around the vessel an inch and a half below the origin of the profunda. Its situation was indicated by an indentation, and, on stretching the tube, the two portions of artery were seen to recede a little at this place from each other, leaving a narrow space between them, which was seen to be transparent, and where the continuity of the two was only kept up by means of cellular membrane. The obliterated portion of artery was not quite an inch in extent; that of the upper extremity of the vessel measuring five-eighths of an inch in length, that of the lower a little more than two-eighths. The ends of both were firmly united and consolidated. The plug in the upper portion of artery terminated superiorly precisely on a level with a small branch going off from the trunk of the vessel. Below the obliterated portion, the artery preserved its natural size, and was quite pervious all the way down to the aneurism, and at one place where it was opened was found to contain blood (liquid). Opposite the aneurism, the artery became

again impervious, and for the extent of upwards of an inch. What remained of the aneurismal sac was of the size of a hen's egg. It formed an abrupt tumor on the vessel. The contents were solid, densely laminated coagula of blood; the section presenting lamellæ of uniform colour and consistence.

New Burlington-street; February 1826.

ART. II.—*Case of Abdominal Dropsy, in which an Attempt was made to cure the Disease by exciting Peritoneal Inflammation.* By H. R. OSWALD, Esq.

IN the month of November, 1822, Betty Craine, æt. twenty-four, a middle-sized woman, of dark leaden complexion, of Celtic parents, and phlegmatic temperament, applied to me on account of an enormous abdominal dropsy, which measured nearly six feet in circumference.

The abdomen felt exceedingly hard and tense, but was not tender. She could hardly walk across her cabin, from dyspnœa and debility, and the weight and tension of the tumor, which caused her to bend the body much forward, leaning her hands on her knees. The emaciation was very considerable; the appetite good; thirst considerable; tongue clean; pulse 120, and small; skin dry, harsh, and rough; bowels habitually costive; urine scanty.

This affection commenced about twelve months ago, after an obstruction of the catamenia for nearly a year, arising, as was supposed, from exposure to cold. The swelling was preceded by lancinating pains in the abdominal and lower part of the thoracic cavities, but which, after a few months, ceased entirely; and the disease had, in a chronic manner, gradually arrived at its present oppressive form.

Paracentesis abdominis being urgently indicated, after the exhibition of two doses of aperient medicine, it was performed on the 25th of November, 1823, in the usual manner, between the margin of the os ilium and the umbilicus, in the presence of Mr. Holford Watts and Mr. William Oswald, then my pupils, and *thirty-five quarts and a half* of clear limpid serum evacuated. We abstracted this large quantity of water gradually, by frequently stopping the discharge, and exhibiting a little spirits and water, keeping up an attention to pressure on the abdomen as it flowed. The patient bore the operation well. After the removal of the fluid, the trunk of the body presented a singular appearance. The loose integuments of the abdomen were so extensive, as to be capable of being laid to one side nearly across the lumbar region, and were thickened into a horny consistence at those points on which the patient had been in the habit of resting the tumor on any support before

her; whilst the cartilages of the ribs remained projecting, according to the form and position she had assumed by becoming accommodated to the great size of the abdominal tumor.—An opiate was administered at bed-time.

November 27th.—Complained of slight pain in the head, together with tenderness in the abdomen and lumbar region. Pulse quick and small, with considerable heat of surface. Venesection was performed, and a purgative administered, with decided relief to these symptoms; and in a few days she began the use of a weak mercurial camphorated liniment, rubbed into the abdomen every night and morning, with the view of altering the action of the torpid vessels of the peritoneum. A course of diuretic and turpentine medicines, given three times a-day, with purgatives occasionally, was at the same time prescribed. As much attention to proper regimen and nursing was also recommended, as the poor circumstances in which she was placed would permit.

Though this plan was closely followed up, with various modifications, and so as to affect the mouth a little, the abdominal tumor began again to increase rapidly, and continued to do so, notwithstanding the employment of a variety of remedies usual in such cases, but which it appears to me unnecessary to detail. Care was taken that the treatment should not reduce the system; and, although it had no effect in checking the re-accumulation of the dropsy, yet the general appearance and health of the patient were manifestly improved by it. The fluid increased so rapidly, that it became necessary to repeat the operation in February 1823, little more than ten weeks after the first tapping; and twenty quarts of a dense and albuminous fluid were evacuated, very different from the limpid serous produce formerly obtained. On cooling, this fluid deposited a heavy sediment, but of which I did not examine the chemical formation. Was this change from a limpid serum to a dense albuminous fluid in so short a period, the consequence of the action of the mercury? It certainly happens in ill-conditioned ulcers and membranes, that a change from an ichorous to a healthy discharge is occasioned by the action of this mineral on the system. Or was this difference in the fluids owing to their being the contents of two different hydatids, or cysts, enlarged rapidly?

After this second operation, repeated venesection, sudorifics, and the exhibition of the compound powder of jalap, as an aperient diuretic, were practised, in conjunction with a course of steel, and occasional blistering to the affected region. These remedies all agreed pretty well with the patient; but the operation became again necessary in April, when nineteen or twenty quarts of a still more viscid fluid were discharged.

But the patient's health was now very considerably improved ; for, within two days after the tapping, she was enabled to walk home (three miles and a half) without difficulty.

Excepting the purgatives, all the other remedies were now discontinued, and I put the patient upon a course of diluted arsenical frictions into the abdomen, with the view of bracing and changing the action of the system of diseased vessels.

I did not see my patient again, however, till July 24th, 1823, eight months after the first and nearly three after the third operation, when she again presented herself, labouring under a return of the disease. Her general health was very much improved, and she had gained so much flesh and muscular vigour, that, had it not been for the large size of the tumor, and the dyspnoea occasioned by it, she said she would have felt quite well. Her appetite was good ; but she complained of being unable to satisfy it, on account of the great oppression of respiration occasioned by taking even a small quantity of food. Tapping was immediately performed, and twenty-two quarts of a colourless albuminous fluid discharged. The integuments and parietes of the belly now presented little induration or thickening, but were, on the contrary, flaccid and soft.

On this occasion, I reasoned in the following manner. In consequence of the failure of all the remedies tried in the cure of this case, and under the conviction that the internal surface of the abdominal sac, instead of a serous, had passed into a membrane secreting a very different fluid, in this manner rendering the disease in some degree a local one, am I warranted in attempting to produce a change in the vessels of this secreting surface, by means of a practice suggested some years previously by a case, which I shall here concisely relate?

In October, 1817, I was called to see a Mr. W—, a prisoner for debt in Castle Rushen, who laboured under dropsy. He was between fifty and sixty years of age, one who is generally described as a broken-down constitution, and a free liver, who had undergone a great deal of fatigue and various hardships in his time ; and even his countenance presented a bloated and sallow aspect. He was unable to lie down, from orthopnea. General anasarca had supervened to ascites, so that, from the toe to the axilla and epigastrium, the integuments pitted deeply on pressure ; and, in the legs and scrotum, the swelling was so great as to render the skin tense and shining. The abdomen was as tense as a drum, but by no means protuberant in proportion. His spirits were good ; and, though his appetite admitted of little nourishment, he had supported himself, he said, by a plentiful allowance of liquor, which he could not do without, and which he could not be prevailed on to give up. Under these circumstances, tapping appeared to me to afford the best chance

of relief; and it was accordingly performed, by puncturing midway between the ilium and umbilicus. The quantity of serum discharged did not amount to two gallons. The operation relieved the tension of the abdomen, of course, but the general anasarca remained in *statu quo*. As I resided ten miles distant from this patient, I left him to the care of Mr. Jones, resident practitioner of Castletown, and did not see him again for nearly a week; when I found that the wound made in the abdominal parietes had not only not closed, but looked angry and callous, and discharged water in large quantities. When I cut through the œdematous integuments, they discharged more water than blood, which caused me to suspect the puncture would be slow in healing; a circumstance not to be wondered at, considering the man's mode of living. From the continual oozing of water from it, the belly became more and more flaccid, and the general dropsy had undergone a corresponding improvement; from which circumstances, and the deep appearance of the wound, there was much reason to conclude the peritoneum remained divided; but the patient complained only of slight pain or tenderness on pressure. However, suspecting that this accident might prove the cause of serious inflammation of the peritoneum, I refrained from probing it, and decided upon letting the case take its course. I therefore confined the practice to saline diuretics and purgatives, and prescribed venesection if the pain in the abdomen on pressure should increase. He drank at this time a pint of gin daily, and denied the possibility of living without it; and, under the circumstances, I did not consider it prudent to contend with him about it. I know this concession will expose me to the censure of some, but the result proved that it was not a fatal error, however much opposed to the best-established theories and opinions. The wound continued open for upwards of a month, and closed gradually. There was no return of the ascites. The anasarca so far abated, that it was reduced to his feet and ankles; and in the autumn of 1818, the year following, I met my patient in the streets of Douglas, a tall, broken-down looking man, but as well, if not better, than he had been for some years previous to his attack of dropsy. He soon after left this island, since which I have lost sight of him.

Independent of the relief to the system arising from the evacuation of the water, I had considered this cure as partly the consequence of a low degree of peritoneal inflammation, induced by the stimulus of air admitted through the aperture, or by an extension of the inflammation from the wound, under the circumstances above described. I had therefore proposed to myself the feasibility of imitating this sort of cure, in the first case that occurred favourable for such an attempt.

This, then, was the state of the question when Betty Craine

presented herself for a fourth operation:—Was I warranted in trying so hazardous a measure as that of inducing peritoneal inflammation, to cure ascites or dropsy of the ovarium? The degree of success that attends the practice warrants me in premising that I was; and, although the case ultimately terminated fatally, that such practice was by no means the cause of death. At any rate, I consider myself bound to make the case known. I considered the probability of success increased by the improved state of the general health of my patient. Had I attempted it during the weak state my patient was in when I first saw her, and whilst the parietes of the belly were callous and diseased, my expectations would have been disappointed.

Impressed with these considerations, I determined in the present instance to keep the wound open; and for this purpose the cannula was left in the wound for the first night after the operation, secured by means of adhesive plaster, but in such a manner as to admit a free passage through it.

July 25th.—Passed a very tolerable night, and has no complaint to make this morning. The cannula slipped from the wound about six o'clock. It caused a little local irritation, but little or no general pain or uneasiness. A good deal of water has oozed out during the night. A tent of prepared sponge was introduced into the wound, secured by a ligature fixed by adhesive plaster. Bowels to be kept open.

26th.—Patient has got up, and is walking about the room. Tent still continues in the wound, without occasioning pain or tenderness. A good deal more water has oozed out into the bed. Urine not complained of as deficient; skin soft, pulse moderate; no other remarkable symptom.

Two days after this, the tent slipped out of the wound; and it had closed before I had an opportunity of re-introducing it. Having consigned the case to the care of Mr. Watts, she had gone home without my knowledge; most probably from some hyperbolical representation of the danger of the practice.

After this period, the treatment of the case was confined to nourishing regimen and exercise, in so far as that could be attained in her circumstances; and a frequent use of the pulvis jalapæ compositus.

September 25, 1823.—Has occasionally called for a supply of her medicine. To-day (two months after the last operation) she reports herself quite well. No re-accumulation of the water has taken place; health and strength continue to improve; and she has experienced a return of the menstrual discharge, which has been absent for nearly three years. Walks into Douglas and back again, a distance of seven miles, the same day, with ease.

In Mr. Holford Watts's notes of the case, I find the following

remark:—"From the foregoing statement, the tent has fully answered our expectations, in altering the nature of the secretions of the cavity, and producing a radical cure of the disease. The tent acted so insensibly in producing this alteration, that we almost despaired of success; but the event has proved the utility of the method of cure practised." Without expressing quite so much confidence in the *modus operandi* in the cure of this case, I shall proceed to detail the subsequent history of it.

August 30th, 1824.—Reports that, till within the last three months, she continued quite well, and menstruated regularly for a period of about nine months. But the disease has lately been increasing rapidly, for which relapse she can assign no cause, excepting a partial exposure to damp. On this occasion the disease is accompanied with much more fever and irritability than at any former one. Has been confined to her bed for the last month, and is not able to sit up for any length of time, owing to the tenderness of the abdomen, and the great weight she has to support. Has taken some of the medicine she formerly found useful, but without any benefit. Pulse 100, and small; respiration very difficult, though it does not amount to orthopnœa, and is most easy in the recumbent posture. Expects no relief from any means except the operation, which I immediately proceeded with, and in the usual manner evacuated twenty-seven quarts of a very dark-coloured liquid, of great weight, from the quantity of mucus with which it was loaded. It was nearly as thick as the white of an egg; the colour reddish, and partaking of that of the grounds of coffee. After standing a night, it deposited a similar sediment.

Towards the close of the tapping, I found it was impossible to evacuate the whole of the fluid from the abdominal cavity, on account of a large tumor of a solid nature, that appeared to occupy the whole of the lower part of the abdomen, in a line with the superior processes of the ossa ilia, and which seemed to obtrude itself against the mouth of the cannula. Pulse 120 after the operation, which she bore remarkably well.

September 1st.—Passed two good nights. There is a little discharge from the puncture. Complains of nothing in particular; but the respiration is still hurried, and the emaciation and varicose state of the superficial veins of the abdomen more conspicuous than ever.

6th.—Wound not yet healed, but discharges very little. There appears to be a fresh effusion of dropsical fluid going on; for I cannot now feel distinctly the tumor in the lower part of the belly. Is able to sit up a little.

October 19th.—Abdominal tumefaction has regained its usual magnitude. Debility and emaciation greater than ever; pulse 120, and small. She is feverish and exhausted; has ap-

petite only for a little tea and toast, and such like. Considered the case desperate, but, at her own request, tapped her again to-day, and drew off sixteen quarts of the same mucous fluid, but mixed with a flocculent matter of a purulent sort.

23d.—Febrile symptoms and dyspnœa considerably abated. The puncture, which was made through the umbilical ring, through which the water protruded, has closed. Bowels to be kept open with the *pilulæ rhei* co., and no other medicine to be taken.

December 20th.—The dropsical swelling is apparently as large as before it was last evacuated; but she herself thinks it is not so oppressively tense. Back ulcerated, from lying on it so long. Pulse 140, and so feeble as to be hardly perceptible. Respiration is surprisingly free, considering the extent of the disease, and the necessity of being always in the recumbent posture. Is anxious to have the operation performed again; but, taking all circumstances into consideration, it is manifest there is great risk of her sinking suddenly under it. The *pilulæ rhei* comp., to keep the bowels open, and adhesive plaster to dress the back, were therefore ordered; and a little patience recommended in a cheerful manner.

December 25th.—Died yesterday at five A.M. Having obtained permission, I proceeded to open the body to-day at ten o'clock, accompanied by Mr. Watts, and Mr. Anderson, surgeon, (at that time on a visit here.) Some gangrenous spots appeared on the most prominent parts of the abdomen; and the inferior extremities, especially the right leg, were œdematous. The fluid was, as a first step, evacuated by tapping, but the discharge of it was much impeded by the tumor in the pelvis formerly noticed: we had, therefore, to complete it by laying open the abdomen entirely, when from three to four gallons in all were collected. The whole of the internal cavity of this vast sac was lined with a dense, white, and rough-looking membrane, of a fragile and diseased structure. The abdominal muscles had almost entirely disappeared, so that externally the membrane adhered loosely to a thin layer of blackish cellular membrane, interposed between it and the skin. It adhered also to the diaphragm, and to the liver; both of which had been forced deep under the ribs. Behind it, the intestines were found of an unusually small size, and dark leaden colour. The interior surface of the sac was rendered rough by a sort of tubercular elevation, and flakes of purulent albumen. In general, it was one-eighth of an inch in thickness, and in some places it seemed to consist of more layers than one. On tracing it into the pelvis, its internal surface became loaded with a tubercular, carcinomatous, and pale-coloured fungus, possessing a structure not unlike that of the placenta, and from half an

inch to one inch and a half in thickness, especially on the right side, where the punctures had been most frequently made. This was the hard tumor felt occupying the pelvis in a line with the superior processes of the ossa ilii. Tracing the sac still lower, it was discovered to be the cyst of a dropsy, originating in the right ovarium, at the fundus of the sac, or, more properly speaking, its neck. It terminated in a space about the size of the palm of the hand, which had once been occupied by the structures connected with the ovarium; and at this site it involved congeries of several groupes of cysts, like hydatids, of sizes from that of a small orange to that of a filbert-nut, which were smooth and pellucid, and contained a limpid serum. The left ovary was also diseased, and consisted of a congeries of smaller-sized cysts, cemented by a membranous and fleshy envelope, and exhibiting a beautiful specimen of incipient dropsy of the ovarium, as described by Dr. Baillie, in his *Morbid Anatomy*; where he views such a congeries, not as hydatids, but as cysts or capsules, which undergo enlargement successively.

The uterus was healthy, and of the usual size. There was a stricture in the rectum, a little below the symoid flexure of the colon; and above it that intestine was much loaded. The liver was half its natural size; but, excepting the diseased look caused on its surface by the adhesion of the sac, it was free from derangement of structure. The gall-bladder was quite distended with black and viscid bile, and filled with biliary concretions. Excepting a most contracted and diminutive size, the contents of the thorax presented nothing remarkable.

The foregoing statement involves four facts and questions of considerable importance in pathology. 1st. The great quantity of fluids evacuated in so short a space of time: no less than ninety-six quarts in eight months, by four operations; and fifty-nine quarts from August to December, 1824, (or four months,) by three. 2dly. The variety in the nature, consistence, and colour of these fluids. 3dly. The possibility of curing ascites and dropsy of the ovaria, by exciting inflammation in the abdominal sac, either by the admission of air into it, or by mechanical irritation. And 4thly. The possibility of a thickening of the parietes of the abdomen by inflammation, or by an exudation of a carcinomatous sort, being mistaken for a tumor rising out of the pelvis. But, as most men will form their own opinions on these facts, I think it preferable to confine myself to simply pointing them out.

Douglas, Isle of Man;

February, 1826.

ART. III.—*A short Description of an Ophthalmia which prevailed in Gibraltar and Bombay; with an Account of the Effect of Sea-water in arresting its Progress.* By GEORGE RICHMOND, assistant Surgeon of the 4th Light Dragoons.

NINE years have passed since the first of the following experiments was performed, and found to be of effect in cutting short the progress of an obstinate ophthalmia, which appeared in Gibraltar. The means of practice were so simple and easy, that I wished, long before this time, to have placed them in the pages of some periodical publication; but I was unwilling to form an hypothesis, or advance a remedy, on the proof of one experiment only. For this reason I withheld the result of the practice which I pursued, until the opportunity of more experience would either prove my theory to be unsound, or establish it on the principles of rational induction.

No other instance of the disease, spreading to the extent which I had first seen it, fell under my care before the year 1823, when I happened to be at Bombay: it had there broken out, and grievously affected the children of the charity-schools. This being another well-timed incident for putting my remedies again to the test, I naturally felt very desirous of availing myself of it; and I am happy the result enables me to say, that the disease was arrested in the same decided manner as by that mode of practice which I pursued in Gibraltar.

During the year 1815, while the 2d battalion of the 11th Regiment was quartered at Gibraltar, an ophthalmia broke out, and spread among the men with amazing rapidity, threatening destruction to every eye that came under its influence. The inflammation first made its appearance on the inner edges of the tarsi; thence extended over the surface of the conjunctiva lining the palpebræ. In proportion to the inflammation in this membrane, the meibomian glands became enlarged. In most cases, the intolerance of light was considerable; the margin of the iris was drawn between the chambers like a tense curtain, diminishing the diameter of the pupil, and sometimes giving the pupillary margin the appearance of being sunk, or drawn deeper towards the bottom of the eye than when in health. Light did not contract the compass of the pupil,—not even when the flame of a candle was held before it.

The cornea was put more on the stretch, and had a more glistening appearance, than when in health: in some cases, its augmented convexity was very perceptible. This was owing to the aqueous secretion being greater than the power of absorption. At this stage of the disease, the secretion of tears flowing over the cheeks was copious and hot: in the space of a

few hours it was mixed with pus, which could be frequently seen before the matter was discharged from between the eyelids. By laying hold of the eyelashes, and gently raising up the eyelids, the pus could be seen spread on the lining membrane of the palpebræ, in the form of a patch, about the eighth of an inch in diameter.

The nice adaptation of the globe to its appendages had either, by its rolling motions, squeezed out the serous part of the pus, while that of greater density was retained; or it is not improbable that these patches were the concretions of pus, coagulated by the commixture of tears; for the salt in them may be sufficient to cause coagulation of pus, and by this means alter the consistence and appearance of the discharge.

The vessels and meibomian glands situated on the lining membrane of the palpebræ, rose and swelled above its surface, leaving between them hollow spaces, in which pus was collected in the form and manner I have described. But, when these organs were not in this state, and preserved a smooth uniform swelling over the surface of the membrane, and all the parts were of an equal vascularity, pus was then found spread in an extensive thin layer, alike in thickness, but the consistence much softer and possessed of greater tenuity than that already mentioned. This seems to be the usual character of the pus. It is not improbable that the alteration of membranous structure is the cause of pain, and of the sensation of sand of which the patient complains.

Painful œdematous swellings arose in the integuments round the eye, a shining pale-red colour pervaded the surface of the skin, and an intense shooting pain passed through the eyeball and forehead, accompanied with ardent fever, and a strong hard pulse. These symptoms indicated strong inflammation, and required very active means to check their progress.

The daily admissions into hospital became so numerous, and the cases so severe, as to draw the attention of the military officers of the garrison, to consult and devise with the professional gentlemen the means most likely to arrest and eradicate the disease. A conjecture was then entertained that the current of cold night-air, carried through the barrack windows over the men during sleep, was the cause of the rise and progress of the disease; and, to prevent it from having further effect, orders were given that a number of the windows should be built up half-way, and some completely. But professional opinion preponderated in the belief of the disease having been produced by some noxious quality of the water; and, to prove the correctness of this theory, chemists were employed in analysing the water, which was found to contain no other matter, besides its primary and constituent parts, than a portion

of the carbonate of lime; a production naturally to be expected, because the water issues from between beds of that substance.

To prevent the disease from spreading by contact, clean towels were ordered to be distributed occasionally among the men; and, to preserve cleanliness and regularity of conduct, strict regulations were adopted.

All these means, in their application, were very well directed, and were prosecuted with active perseverance; but they had not the most distant effect in restraining the disease. It continued to spread indiscriminately, with unremitted violence, among the men.

The sick-list soon mounted so high as to raise the apprehension of the colonel commanding the regiment, that a representation of the unhealthy state of the men would be forwarded to the Horse Guards, and inevitably prevent the regiment from being called into active service. That ground for such a report should not exist, the most powerful remedies with which I was acquainted were adopted in the process of cure.

The difference of atmospherical temperature during the night from that during the day, was sometimes considerable, but not more than gave health and vigour to the troops, particularly as they were well clothed. Chilly air, wafted over the men during sleep, could not generate ophthalmia to the severity and extent in which it had prevailed. Exposure like this to the night might have brought on other diseases of an inflammatory nature; but how it could produce so much inflammation in the eyes, without extraneous bodies having been carried into them, I could not understand; and, on that account, I concluded this to be but a conjectural inference.

Many of the soldiers were posted on the batteries, and other parts of the garrison, which were plastered with lime; the floors were paved with limestone, which formed a smooth white surface, reflecting the light with great intensity; so that a person with an inactive iris, passing quickly from the shade to this strong light, had a very powerful impression made on the retina.

Frequent reiterations of these changes, in warm climates, bring on amaurosis and glaucoma. Though these sudden changes were not the leading causes of the ophthalmia, yet there was no doubt of their being auxiliaries; for the strong light, falling on the retina in an unusual quantity, had a tendency to excite inflammation.

At the season of the year in which the disease prevailed, the sirocco winds blew with considerable violence, drifting great quantities of sand and dust through the streets of the garrison; especially at Cooperage barracks, where the regiment was

quartered. This was owing to the great concourse of people, who met there for the various purposes of commerce, and who had constantly in use many carts and waggons, for the conveyance of merchandise.

The men who were not required to mount guard were employed in blowing and raising rock, to erect and repair public buildings; many also laboured in other departments of government, equally exposed to an atmosphere loaded with clouds of dust, and to the frequent emissions of particles of fire, occasioned by the collisions of the workmen's instruments. The ready and imperceptible admission of these floating particles between the eyelids, will be easily conceived by those who have been much in warm countries; as well as how the friction of particles on the outer coats of the eye produces inflammation through the whole structure.

The causes which I have enumerated appeared to me to have been sufficient to generate and keep up the disease. The means which had been adopted to arrest it had completely failed; and, on that account, a question arose, how did the women and children escape the disease, if the causes were as stated by gentlemen of the profession? The answer was simply this: they were not exposed to the same causes as the men, and to which I have ascribed the disease; and, therefore, I recommended the following experiment as worthy of trial.

That every day, after the men had returned from guard and other public duty, they should rest two hours, in order to cool themselves, and to breakfast. That they should then march to the sea, under the command of a commissioned officer, and bathe for two or three minutes. Every man to carry a vessel with him, and bring home a small quantity of sea-water; and to lie down on his back seven or eight times during the day, while his comrade with one hand opened the eyelids, and with the other dropped a little of the sea-water on the eyeball with a spoon. That every non-commissioned officer should be held responsible for the regularity of these applications. At the same time, I went frequently round the barracks, and explained to the men the propriety of the means, and showed them the method of opening the eyelids, and throwing in the water. I also acquainted them with the great impropriety of any one washing in his comrade's vessel, or using his towel.

These means operated so speedily, as to put a final stop to the career of the disease in the course of eight days. The daily bathing, however, was continued for some months, which proved very beneficial, both in keeping the men cleanly and healthy, so that they soon became as strong as those of any other regiment in the service.

The treatment of the disease consisted of unremitted adhe-

rence to the antiphlogistic regimen, and copious abstractions of blood until syncope was produced. In some patients, this diminished action was not necessary; smaller quantities of blood were found sufficient to check the progress of the inflammation: but, in general, it was found necessary to carry bleeding to a considerable length. To act freely on the bowels, and cause counter-irritation, strong cathartics were given; but, in the mean time, care was taken not to excite vomiting, by overloading the stomach with medicines; for, when this was inadvertently brought on, or caused by any spontaneous effort, the fever and inflammatory symptoms ran higher than when vomiting was not induced. But keeping the patient in a constant state of nausea, by small doses of tartar emetic, assisted greatly in subduing the inflammation. To manage this process well, and without exciting vomiting, required the administering hand of the surgeon; for, when it was left to an attendant of the sick, vomiting was occasionally brought on, which tended to frustrate the design. In moderating the circulation, the warm bath was found to be of great service; and, when it brought the patient into a state of faintness, the symptoms of the disease were lessened.

The collyria which I found answer best were solutions of the sulphate of zinc and the sulphate of alum. I made experiments on some others, but found none constringe the vessels, and check the discharge, so readily as these. I give alum, in the acute stage, the preference to zinc.

A weak solution of alum, injected every hour between the eyelids, is the best practice. The surgeon should perform this operation frequently himself, and teach the medical attendants how to do it. In most cases, raising the eyelids gives pain: to avoid this, one or two fingers should be laid on the supercili-um, and two of the other hand on the integuments covering the malar process of the cheek-bone; then, by gently pulling the integuments, the eyelids may be separated, while another person throws in the collyrium with a syringe.

It is of great importance to the patient that the surgeon should pay particular attention to this part of practice; for, by washing the purulent matter from the eyes every hour, or according to the violence of the disease, it is prevented from accumulating and fretting the organs. I am certain, by a constant attention to this circumstance, many hundreds of eyes have been saved. By strictly pursuing the line of practice which I have laid down, not one of my patients had his vision in the smallest degree impaired; and it was seldom I detained a patient more than two weeks in hospital, the disease being eradicated within that period.

At Bombay, the Committee of the Society for promoting the

Education of Poor Children have, in the year 1823, and in their eighth annual Report, announced the prevalence of a reiterated ophthalmia among the children of the charity-schools; of which the members state that it was peculiar to the country, and returned periodically. This I beg leave to give in their own words, extracted from the Report:—In page 10th, the members of the committee say, “Notwithstanding, however, for some months past, the children have suffered very considerably from the measles, and from sore eyes; the latter is a disorder which seems peculiar to the country, and to return periodically; it is attended with very acute and painful inflammation, and sometimes occasions a total loss of sight.”

The disease spread so rapidly as to lay fifty-five at once in the hospital, and in the course of three weeks half the number belonging to the institution were admitted with it. The progress of the inflammation was equally obstinate and severe as that in Gibraltar; but, the patients being young, and habituated to regularity and temperance, the disease in them was more easily subdued than in the soldiers. But what I had principally to fear was the subtlety of its progress, diffusing its influence to a wide extent. To prevent this, I knew of no remedy so likely to prove effectual in checking its progress, as that which I found so eminently useful in Gibraltar. For that reason, I recommended all the boys in the school to bathe in the sea every day, and a small quantity of sea-water to be thrown in between the eyelids, not less than eight times during the day, in the same manner as I have described for the soldiers; and every other means of the same practice to be used as with them.

By strictly pursuing this scheme, at the end of two weeks the disease had entirely ceased to spread; but, in a considerable number, in whom it had taken a firm root, it required a month to complete the cure.

In comparing the causes, symptoms, and effects of the disease in Bombay, with those of the disease in Gibraltar, they were found to correspond in all their various modifications, except that, by the long reiterated action, the disease in the children had taken a deeper and more stubborn root in the tunics of the eye than in the soldiers'; and could not, therefore, be eradicated by the same means of treatment as those employed for common ophthalmia.

In some patients, an opacity in the cornea had considerably obscured vision; and, although opaque matter had been plentifully thrown out between the layers, it had not got time to organize, and was on that account readily removed, and perfect sight restored.

In a great number, chronic vascularity of the conjunctiva,

with a suffusion of tears constantly rolling down the cheeks, occurred; and these patients had the diameter of their pupils so much contracted, as to cause imperfect vision. But a few applications of the belladonna broke up the adhesions of the iris, and restored the pupils to their original compass.

In many, on everting the upper eyelids, the conjunctivæ were found covered with small fleshy eminences, which are commonly termed granulations. In the children, they were more crowded towards the angles of the eye than on the tarsal circle, and were soft and pulpy; whereas, in patients advanced in life, they are frequently hard, and difficult to remove.

It was owing to these small bodies that the morbid action and periodical return of the disease were kept up; and it was these causes which also led the members of the committee into the mistake of assigning the disease as the peculiar property of Bombay. In most of these patients, a partial cure or relief had been frequently accomplished; but, these granulations not being removed, the least severity of weather, or exposure of the eyes to dust, occasioned a relapse, and baffled the remedies. However, I found a few applications of the sulphate of copper to these granulations completely remove them, and perfect a cure.

From the time I took charge of these little patients to the period I cut off the disease, and eradicated it from within the walls of the schools, a course of six weeks was occupied; and, although it is now two years since it was arrested, it is not a little gratifying to be able to say that it has not reappeared.

Mr. Morgan, the tutor, informed me that, whenever he observes the least redness in any of the vessels covering the conjunctiva, he has immediate recourse to the sea-water, as a collyrium, with good effect. This washes out any foreign particles which may have been accidentally carried into the eyes, and acts at the same time as a mild collyrium.

ART. VI.—*On Erysipelas.* By P. C. BLACKETT, M.R.C.S. Surgeon Royal Navy; and Surgeon Extraordinary to His Royal Highness the Duke of Clarence.

MANY years since, I had occasion to direct my attention to erysipelas, a disease then but little known, and yet not well understood. The following notes were made at that time; the cases subjoined are of more recent occurrence. I am induced to publish both, chiefly with a view of directing attention to the treatment of a disease but little subjected to medicine. The practice here inculcated is one which I have always adopted, and generally with success; and, as it differs a little from that usually advised, the cases so managed may not be unacceptable.

Erysipelas is an inflammatory fever of two or three days, (rarely longer,) attended commonly with drowsiness, often with delirium. Pulse generally full and hard. There succeeds redness of the face or some other part, with a continuation of febrile action, tending either to *Erysipelas vesiculosum* or *E. phlyctenodes*, to abscess, or to gangrene.

Species.—1. *Erysipelas vesiculosum*. 2. *Erysipelas phlyctenodes*. 3. *Erysipelas infantum*.

Symptoms.—Rigors, and other indications of pyrexia; great confusion of the head, amounting even thus early to delirium; coma; nausea, vomiting; pulse quick and hard, strong, or small, as the fever may incline to the inflammatory or typhoid kind. The eruption appears about the second or third day; the fever and sickness then abate, though there often remains some degree of both during the progress of the disease. The redness is at first of no great extent, and gradually extends from the spot it first occupied to other adjoining parts, until it has affected the whole head, trunk, or extremities, according to the first point of attack. When the inflammation is confined to the face, the headache continues until the decline of the eruption; the eyelids swell, and the eyes are closed. If the disease be of unusual duration, the eruption passes often from the one cheek to the other, and extends successively over the forehead, scalp, and nape of the neck. As this characteristic redness spreads, it commonly leaves, or at least is much abated in, those parts it had primarily occupied. All parts so affected are subjected also to a degree of swelling, which remains for a longer or shorter time after the disappearance of the redness. When the inflammation has continued for some time, blisters commonly arise, of a larger or smaller size, in patches on the affected part. These contain a thin colourless fluid, which sooner or later escapes. The surface of the skin in the blistered places becomes at times livid and blackish; but this seldom penetrates deeply, or discovers any disposition to gangrene. Where the parts are not blistered, the cuticle, towards the close of the disease, suffers a considerable desquamation. Occasionally the tumor of the eyelids ends in a suppuration of the lids and cornea.

The fever, however, does not always at this period suffer a remission, but at times exacerbates with the spreading and increasing inflammation; is frequently aggravated by increase of coma or delirium, and the patient expires about the ninth or eleventh day. In such cases, it is supposed that the disease is translated from the external to the internal parts. But this affection of the brain is merely a communication from the external disease, made by sympathetic action, as it even continues and increases with the latter.

The eruption suddenly retiring, the patient is affected with nausea, vomiting, anxiety, &c. The erysipelas may again show itself in a different part: then, he finds himself sensibly relieved. If, instead of the eruption re-appearing, the brain or chest should be affected, death ensues within a few hours. These fatal changes occur oftentimes without the least reason for ascribing them either to any error of practice in the physician, or of regimen in his patient. It must, however, be remembered that, when the head is affected, it is not always that the external inflammation recedes: more commonly the violence of the determination is such, that the internal as well as external arteries take at once their share of it, and the brain and external surfaces suffer equally and together. The same consequences ensue on the lungs being attacked.

When the inflammation attacks the extremities, it extends generally towards the trunk; and, when the tumefaction is considerable, the part affected either suppurates or is covered with small vesications, filled with a clear watery humor, similar to those consequent upon a burn: these afterwards dry and desquamate.

At times a malignant species of erysipelas is epidemical; this frequently terminates in gangrene.

There are some constitutions subjected to a very frequently recurring, and, as it were, an habitual erysipelas; and often it is the same part which, at each period, is the subject of the affection. In these patients, the attack is in general very slight. The disease makes its appearance with a roughness, heat, pain, and redness of the skin, which becomes pale on pressure, regaining its colour on such obstruction being removed. There prevails a febrile disposition likewise, and the patient is hot and thirsty. These symptoms continue only for a few days. The surface becomes yellow, the cuticle falls off in scales; and the patient recovers, without further inconvenience.

Sometimes even this habitual and recurrent species of the disease will continue from eight to twelve days, with the greatest violence, and at last terminate by a plentiful perspiration; which may sometimes be predicted from an excessive restlessness, attended with thirst, and anxiety.

The *predisposing causes* are—a cholero-sanguine temperament, a plethoric habit, and previous affections of the same nature.

The *exciting causes* are—cold and excessive heat, or vicissitudes of temperature; abuse of fermented liquors; suppressed evacuations, and all other causes inducing plethora; the presence of irritating matter in the primæ viæ, more especially of acrid bile; wounds; contagion.

The event of this disease may be foreseen from the degree of

violence accompanying those symptoms which denote more or less affection of the brain. If neither delirium nor coma take place, it is seldom attended with danger; but these symptoms appearing in an early stage of the disorder, the utmost danger may be apprehended. When, therefore, the fever is merely inflammatory, the eruption of a bright scarlet or red colour, not extending over a large surface, unattended with vesications,—the fever, delirium, and coma, diminishing upon the appearance of the eruption, and this soon after assuming a yellow hue, with an abatement of the swelling, &c. we may draw a favourable prognosis of the event. But, if the fever assumes the typhoid form, protracted to the seventh, ninth, or thirteenth day, with an increase of delirium or coma,—the eruption becoming of a dark-red brick colour, suddenly receding from the external to the internal parts, extending continually without leaving its original seat, with livid and dark vesications,—weak, rapid, and irregular pulse,—great loss of strength,—the disease being epidemic,—the patient naturally of a weak habit, or emaciated by previous illness,—the disease being combined with dropsy, jaundice, or other affections, originating in a depraved condition of some organ; then our prognosis will be very unfavourable, and particularly should the disease be consequent upon wounds or operations.

The *treatment* of this disorder must always be regulated by the course its varied nature may pursue; accordingly, our indications will be—

1st. To reduce all inflammatory action.

2dly. To support the strength of the patient, should the disease take on the typhoid form.

3dly. To obviate the tendency to a determination to the head, or any other important organ.

4thly. Neither to meddle with the sloughs, nor puncture the vesications.

When the face is attacked, and there are marked symptoms of phlegmonous inflammation, the antiphlogistic regimen should, in the first instance, be adopted; and, on this being early done, depends its ultimate success. Such depletions as blood-letting and purging will require the utmost nicety and skill in their direction; for it seldom occurs that the fever is merely inflammatory: more generally it is mixed, having the symptoms of synocha in the commencement, and assuming a typhoid character towards the end. Still, in the first stage of the disease, according to the strength and hardness of the pulse and urgency of the symptoms, copious and rapid evacuations of blood will be both necessary and salutary; small and repeated bleedings being, on the other hand, always attended with the greatest danger. Local bleedings

are always attended with the greatest peril, as the skin, where it has been punctured, ever disposes to gangrene. Cupping, leeches, &c. should therefore be exploded entirely in the treatment.

When the typhoid form supervenes, the utmost attention must be paid to cleanliness: frequent change of linen, ventilating and fumigating the room of the patient, and frequently sprinkling the apartment with vinegar, is highly necessary; together with the use of fruits, the exhibition of antiseptics, especially cinchona, combined with the mineral acids and sedatives; such as opium, wine, brandy, and bottled porter.

The bowels should be kept continually and freely open during the whole of the disease; still they should not suffer too great an excitation during the last stage. The free exhibition of purgatives during the early period of the attack, is indispensably necessary; and frequently, from the accompanying torpor of the bowels, requires a freedom and liberality of dose in hot climates, that appears alarming in more temperate regions. They should be repeated, and, if occasion requires it, assisted with enemas, till they have produced from ten to twelve copious evacuations. The thorough evacuation of the whole alimentary canal is (I must repeat again) absolutely necessary, and cannot, during the first hours of the attack, be too much insisted on. I have said that, in the latter stage, the bowels should not be too much excited; because a distressing diarrhœa, or constant attempts at evacuation, with tormina, is frequently a most harrassing circumstance at this period. The submuriate of mercury is to be administered in doses of from three to twelve grains, with senna, rhubarb, or any other mild aperient or enema.

Where coma or delirium exists, the semicupium, together with sinapisms and blisters to the nape of the neck, have afforded much relief.

To obviate a tendency to a transfer of this disease to any internal part, must be our next consideration. When this takes place to the stomach, great anxiety and sickness occur; violent and burning pain; sudden and great prostration of strength; small, hard, contracted, and rapid pulse; frequent and distressing hiccup. The pain is much aggravated by taking food, and by pressure; and an erysipelatous eruption appears on the fauces.

When the change is directed to the heart, syncope supervenes, with great anxiety about that region, and a sudden deprivation of animal and vital power and action, the patient being at once deprived of pulse, sense, and motion; the countenance has a death-like paleness, the extremities cold and flaccid; the mouth is sometimes closely shut, sometimes gaping

open. Should recovery from this paroxysm take place, it is accompanied with deeply-drawn and heavy sighs.

When the change is to the lungs, there is an acute pain referred to the side, about the sixth or seventh rib, lancinating to the sternum and scapula; the breathing is anxious, and the pain is much increased during inspiration; frequent, hard, contracted, and vibrating pulse; the face becomes morbidly pale, the extremities shrunk and cold.

When referred to the head, excruciating pain in that part is felt, with extreme sensibility to light and sound; the expression of the countenance is wild; the face cold, pale, and shrunken, with constant pervigilium. At last, the face becomes flushed and turgid; the eyes stare, and appear as starting from their orbits, with ferocious delirium. The skin is dry and burning; the tongue parched, white, or yellow, or black; pulse small, hard, and rapid.

The treatment here is regulated by the symptoms which lead to a judgment whether this form of the disease be consequent upon typhus or synocha. If it has followed the former, blisters, semicupium, sinapisms, &c. should be advised; if the latter, general and topical bleeding may be permitted; blisters, fomentations, pediluvium, and the general treatment for inflammation of the organ affected.

The external applications directed are various: starch and flour (which are perhaps the best), litharge, warm spirituous fomentations, and ointment of opium and belladonna. Cold applications should ever be avoided; even when the patient is young, and the inflammatory action is excessively strong.

When the erysipelatous inflammation produces vesications, suppuration, or gangrene, the practitioner should be careful not to puncture the vesications, or lay open the abscesses, or remove the sloughs, but in every case let nature act for herself: the only thing he has to do is to watch quietly the progress of these terminations. If vesications form, absorbent powders should be applied; if abscesses, poultices and fomentations; if gangrene, a similar treatment to abscess. But, should these applications be found painful or insufficient, opium or the belladonna may be directed.

The erysipelas of new-born infants must be treated according to symptoms; but the chief thing to be depended on is a thorough evacuation of those dark-coloured fæces, with which the bowels are constantly loaded.

CASE I.

T. W—, a gentleman about fifty-seven years of age, a very free liver, and of a very gross habit of body, in the autumn of 1821, slipped while stepping into a coach, and bruised the

upper part of his right ankle, by which the skin was abraded to about the size of a sixpence. The wound was so slight, that he took not the least notice of it, until four or five days after, when it began to pain him and to swell. He applied to an apothecary, who advised him to apply a preparation of the liq. plumbi acet. and water. This appeared to relieve him until the tenth day, when he was attacked with rigors; the pain of the wounded part became more severe, and considerable swelling took place. Towards bed-time, his head began to ache violently, and the whole body became of a burning heat; the pain of the affected extremity increasing in a most aggravated degree. A poultice was applied, not only to the wound, but up to the very calf of the leg.

The next morning I was called in to attend him. I found him in a state of high delirium; his pulse small, hard, and rapid; his tongue brown; skin dry and burning; bowels constipated; urine scanty, and of a dark red colour; the leg, as well as the foot, was highly inflamed and swollen; vesications had formed. I ordered the poultice to be discontinued; the leg and foot was dusted with starch-powder, and rolled in a calico bandage. The bowels were relieved by the following medicines:

- R. Hydr. submuriat. gr. vj.
 Conf. rosæ q. s. ut fiat pil. j. statim sumend.
 R. Infusi sennæ, ℥iss.
 Magn. sulph. ʒij.
 Træ. jalapæ, ʒij. M. fiat haustus post horam

unam sumendus.

His diet was to consist of weak mutton broth, barley-water, and fruits.

The next day, I found the medicine had operated well; his delirium had abated, and his tongue beginning to clean; pulse less frequent and soft; pain of the foot and leg much lessened; the swelling and redness were also abated, but the vesications were larger, and around their bases the skin had turned to a very dark brown colour, and was excessively irritable to pressure; the skin generally was comfortable and moist. I ordered a continuance of the same applications, with the following:

- R. Infus. cascaril. ʒvj.
 Magnes. sulph. ʒij.
 Ext. conii, ʒj.
 Acid. sulphur. dilut. m. xv. M. fiat mist.
 cujus capiat coch. iij. tertiâ quâque horâ.

I directed his diet to be full, and that he should drink, during the four and twenty hours, a pint of port-wine.

On the following morning, his general health was much improved; bowels open, tongue clean, no thirst; urine copious and clear; pulse weak, but regular. The vesications were still

very brown: one had given way, and discharged a yellowish fluid.

The same diet, external applications, and internal treatment, were persevered in for four days longer. When I again saw him, I found that all the vesications, save one, had subsided: this one was about four inches long, and two broad. He was altogether much improved.—*Perstet in usu medicamentorum*.

In about three days from this, the vesication gave way; and, in a week, the whole of the skin which covered the vesications came away, leaving the parts very tender for a long time. By continuing the applications, keeping the bowels regular, &c. he became in the course of two weeks perfectly well.

In this case I have not the least doubt that, had bleeding been resorted to, the patient would have died in a few days. The blood would have been found entirely dissolved, and all its particles would have separated themselves in a few minutes subsequent to the removal from the vein. The delirium in this patient was principally produced, no doubt, by the putrid matters collected in the *prima viæ*; to remove which is a most important object, contributing to mitigate, and often to prevent fatal consequences.

From the very considerable number of cases exactly similar to this, which I have had an opportunity of attending to, I can feel no difficulty in giving my opinion as to the effect of the plan of treatment here pursued. In all these cases, the disease has been attended more generally with an irregular kind of typhus than with synocha; the fever, which always sooner or later took place, partaking decidedly of the characters peculiar to the former. I have found these cases tedious, particularly where the exhibition of tonics was delayed. I have, however, constantly found that, when the tonics—acids, port-wine, and nutritious diet,—have been early and freely used, they have produced the most beneficial effects, and, I may say, certainly cured my patients.

CASE II.

M. P—, a young woman, aged nineteen years, was attacked with erysipelas of the right side of the face, during the summer months of 1822. She was ordered by her medical attendant to apply a cooling lotion, and take a gentle aperient. She got well (it was supposed) about the fourth day; but, on the sixth or seventh from the first attack, the disease appeared, with aggravated vigour, on the left side of the face. The same remedies were had recourse to, but, instead of relieving the symptoms, materially increased them. Two days after this second attack, I was requested to see her, and take her under my charge. I found the face of my patient very much swollen; the

eyelids closed and tumefied to the greatest degree, so much so that it was impossible to separate them; and, in the attempt, a sanious discharge began to flow from between them. She complained of great pain and heat in the inflamed parts, which presented the genuine character of erysipelas. She was excessively restless and thirsty, with great heat over her whole body. Her pulse was upwards of 120, and feeble; there was a slight degree of delirium; her bowels were constipated; urine scanty, and of a dark red colour, affording a thick deposit. I immediately gave orders she should have an enema, and prescribed the following:

R. Hydr. submur. gr. iij.
 Extr. conii q. s. ut fiat pil. j. statim sumenda.
 R. Infus. sennæ comp. Aq. menth. pip. āā ʒijss.
 Magnes. sulph. ʒj.

Træ. sennæ comp. ʒss. M. fiat mistura cujus capiat cochlearia duo tertiâ quâque horâ, donec alvus copiose respondeat.

I directed also the application of a bread-and-milk poultice to the inflamed eyelids every three hours.

The next morning, I found that the enema and aperients had freely operated; thirst had abated, and the heat of the body decreased; pulse ninety-six, but still weak; urine not quite so high coloured, and rather more in quantity; pain much less, but she complained of considerable weakness; had also passed a better night than before. The eyelids were not quite so much inflamed: I endeavoured to open them, but, as yesterday, a sanious discharge, with a few yellow particles of sloughs, followed the attempt.—Ordered the poultice to be continued, and that she should occasionally take a little port-wine negus; her diet to be broths. Prescribed the following draught:

R. Sodæ carbon. ʒj.
 Succ. limonis recentis q. s. ad saturationem, efficiendam
 Infus. cascaril. ʒiss.

Syr. aurant ʒj. M. fiat haustus quartâ quâque horâ sumendus.

On the following day, I found her much the same, perhaps rather better than otherwise. To continue the medicines and applications as before. Has not had an evacuation: ordered, therefore, the following draught early in the morning:

R. Pulv. rhæi, gr. x.
 Potass. tart. gr. xx.
 Aq. menth. virid. ʒiss. M. fiat haustus primo

mane sumendus.

To-day (the sixth of the attack) I found her in a weaker state than yesterday; pulse weak and rapid, and tongue furred: the swelling was much subsided, but had acquired a livid colour;

bowels had been twice opened; there appears a slight degree of coma; there is also a small slough on the left eye, which, on examination, proves to be a small portion of the cornea. No pain,—but very restless. Gave directions that she should take a pint of wine in the twenty-four hours, with nutritious broths, &c.; the poultice to be continued, and the following taken:

R. Infus. cascar. ℥vss.

Træ. cinchonæ, ℥j.

Extr. conii, gr. x.

Acid. sulph. dilut. m. xv. M. fiat mistura, cujus capiat cochlearia ij. tertiâ quâque horâ.

This morning (seventh) she could open the eye; but the eyeball was so inflamed that it was impossible to distinguish the pupil, excepting at the place where the cornea had sloughed. Pulse seventy-two; thirst less; excessively weak.—To continue all prescriptions excepting the poultice; the eye and lids to be kept clean by a warm infusion of chamomile flowers. Wine, with generous diet, to be continued.

To-day (eighth) much as yesterday.

Did not see her for two days: found her then (eleventh day) much improved. There had been a discharge of pus from the inflamed eye and lids; the eyeball had nearly recovered its usual appearance, excepting at the point where the cornea had sloughed.—Ordered the chamomile application to be used cold, and the other remedies to be continued as before.

In five days more, I found her perfectly convalescent. There was a slight protrusion where the slough had taken place: the only thing now complained of was debility. I advised her, when sufficiently strong, to consult an oculist.

I must add, that, during this young lady's sickness, the nurse and servant in attendance were both attacked with erysipelas: strong aperients, and a free use of port-wine, stopped the complaint almost immediately.

This erysipelas phlegmonodes, no doubt, was the production of those repellents which were applied to the early appearance of the disease, it being then probably but of the simple species. Applications of cold lotions may cause a suspension of inflammation, only, however, for the renewal of the attack in a more aggravated form, inducing an irritation which, too frequently, is entirely out of our power to overcome.

Erysipelas was very prevalent during the summer months of 1822, spreading rapidly both in town and country, and was very fatal; no period of life being exempted from its attacks. It was contagious in one family that came under my observation: Mr. —, his lady, the nurse, and two servants, died. In the public institutions, nearly all those attacked with the disease

fell victims to its power; especially those who had undergone any operation. In warm countries, this disposition to become affected with erysipelas after operations is very common.

CASE III.

J. W—, aged twenty-two years, ran a fork into his little finger: he paid no attention to the injury, until a painful sensation in his arm prevented him from using it. Soon it became swollen and inflamed; symptoms of erysipelas came on rapidly. I ordered him hot fomentations and aperients. In two days, the swelling and inflammation subsided in the arm; but the finger, as well as the hand, continued as before. I directed him to poultice the finger. In two or three days, pus was formed at a short distance from the place of the puncture. In five more days, the abscess gave way, and discharged considerably. The tendon was sloughing, and the part very painful; so much so, that he could not bear the poultice. I then ordered him the following ointment and mixture:

R. Extr. belladonnæ, ʒij.

Cerat. sapon. ʒvj. M. fiat unguentum, nocte manequæ applicandum.

R. Extr. conii, ʒj.

Infus. cascaril. ʒvss.

Acid. sulph. dil. m. xv. M. fiat mist. cujus capiat 4tam partem 4tis horis.

On the following morning, the parts were easy, and all, excepting the tendon, healthy in appearance. Complains that he cannot sleep at night.—Directed the continuance of the former prescriptions, with the following pills:

R. Extr. rhæi, gr. viij.

Opii gr. jss. M. fiat massa in pilulas ij. hora somni, manequæ sumendas.

On the following day, I found the tendon loose, and the upper portion detached. He felt himself better, having had a good night. Bowels open.—Perstat in usu medicamentorum.

Did not see him for two days. At the expiration of which time, the tendon was still adhering, but slightly. In three days, the tendon came away, irritation subsided, and he rapidly recovered.

CASE IV.

A young man, about twenty-six years of age, a carpenter by trade, wounded his right foot with a nail. He was of a delicate constitution. The wound did not bleed, but soon began to assume a black colour, and felt benumbed: this, in about half an hour, was succeeded by lancinating pains. The foot soon began to swell, extending in tumefaction as far upwards as the

groin. The next morning it became erysipelatous. I saw him on the following day. The limb was red, and much inflamed; the swelling had extended above the groin; the pain had increased, and extended up the body to the sternum, carrying an uneasy sensation to the throat. Being fearful of lock-jaw, I immediately laid open the wound made by the nail through the fascia: a large quantity of matter was discharged.—I ordered him to poultice the part, and gave him the following mixture:

R. Magnes. sulph. ℥iij.

Mist. camph. ℥vss.

Træ. opii, m. xxiv. M. fiat mistura, eujus capiat cochlearia iij. tertiâ quâque horâ.

On the next day, I found all bad symptoms had vanished: his bowels open, and the erysipelas subsiding. In the course of three weeks he recovered.

11, Park-street, Grosvenor-square;
February, 1826.

ART. V.—On the Use of the *Secale Cornutum* in lingering Labour.

By CHARLES WALLER, Surgeon.

NOTWITHSTANDING the mass of satisfactory information which has of late been accumulating with regard to the efficacy of the *secale cornutum*, in increasing the expulsatory efforts of the uterus, I find that a degree of scepticism still prevails on the subject; and therefore the following cases, which have occurred under my own observation, may not be uninteresting to your readers, as contributing to the general stock of knowledge which we already possess.

The two first cases in which I exhibited the remedy were, if my recollection serves me, (for I omitted to take notes of them,) very unsatisfactory, no apparent effect being produced by it; but in both the uterine action had nearly ceased, the pains being very trifling indeed, with long intervals between them. I employed the ergot in the way recommended by Dr. Merriman,—that is, in infusion: two drachms of *secale cornutum*, coarsely pulverised, and six ounces of boiling water poured upon it. After allowing it to stand twenty minutes, three ounces were given, and in the course of a quarter of an hour the remainder. I now resolved to increase the strength of the infusion for the future, using eight scruples instead of two drachms to six ounces of water; and the following case, which occurred on the 6th of April, 1825, convinced me that the remedy was one of considerable power.

CASE I.

I was sent for, about three o'clock in the morning, to Mrs. S—, ætat. twenty-six, a woman of delicate habit, who was in labour with her second child. I found the os uteri quite obliterated, and the external parts very dilatable, there being a copious mucous secretion. The pains were weak, and there appeared to be a considerable quantity of liquor amnii. I ruptured the membranes, and, upon examination, found the funis descending before the head. My patient was peculiarly anxious for a living child, the former one having been craniotomised. I pressed the cord beyond the head without difficulty, but it descended with the next pain. I then procured a piece of sponge, and intended to press the cord up beyond the head with it, and there leave it, in order that, by imbibing the moisture, it might so far enlarge as to prevent the descent of the funis; but the parts of generation were so tender, that the attempt gave her great pain: I therefore determined to desist, and to content myself by placing the cord in the most roomy part of the pelvis, as the head advanced. At nine o'clock, the pains appeared to be slightly increased, but the intervals between them were long; and, as I apprehended that the child's life depended upon its quick transit through the pelvis, I resolved to try the effect of the infusion of ergot, made in the proportion I have just mentioned, (eight scruples to six ounces of water.) I gave her three ounces at nine o'clock, (the head of the child was still above the brim,) and in less than half an hour the pains had increased to the utmost degree in intensity; in fact, I scarcely ever witnessed such violent uterine action. The child was born about ten o'clock, and, although at first feeble, it soon recovered, and, as well as the mother, did very well.

CASE II.

April, 1825, was requested by a gentleman in the city to visit a patient with him. She was thirty years of age, and was in labour with her first child. I saw her early in the morning, and was informed that she had been in labour all night. The pains were pretty regular, though not very strong; and, as the os uteri was not quite dilated, and the parts of generation still rigid, I recommended nothing to be done at present. The pains soon ceased altogether; but in the course of a few hours they were renewed, but so slightly as merely to produce a feeling of "forcing backwards," (to use the woman's own expression.) The parts being now more relaxed, I advised a trial of the infusion of ergot, which was given, (dose as above;) and, in about three-quarters of an hour, the pains became very strong, and continued so till the child was born. This patient

lost a considerable quantity of blood after the expulsion of the placenta; the child did very well.

CASE III.

In the month of April, 1825, Mrs. M—, ætat. about thirty, was taken with slight labour-pains, which continued during the whole of the night. Between nine and ten in the morning, finding that the pains did not increase, I resolved to try the infusion. The head was engaged in the pelvis, but the ear could not be felt. Three ounces of the infusion were administered, and, as it produced no effect, the dose was repeated in twenty minutes afterwards; and, in less than ten minutes from this time, the pains began to increase, and in about an hour the child was expelled. The child was livid in its appearance, and for the first minute or two did not breathe freely, there being scarcely a convulsive sob; but the circulation through the funis was very vigorous: it was therefore allowed to remain attached to the mother for a short time, and soon recovered.

I ought, perhaps, to state, that in this case the head was very large, and had consequently undergone a good deal of compression. It had, in a remarkable degree, that peculiar shape which, from its appearance, has been termed the sugar-loaf head. The mother did well.

CASE IV.

May, 1825, Mrs. C—, a woman of plethoric habit, ætatis thirty, was taken in labour with her first child. I first saw her about noon, and found that the os uteri had scarcely begun to open. At five in the afternoon, the waters came away; and, on examination, I found the os uteri about the size of a crown-piece, the remaining portion feeling as tough as a piece of the hardest leather: I never, either before or since, felt one in such a state. I took away about twelve ounces of blood, and ordered her an enema; after which, a dose of opium; waiting, however, a few hours, to see what effect the pains had upon the os uteri. By next morning, the child had entered the cavity of the pelvis, but did not advance, although she had tolerable pains. The arch of the pubis appeared rather narrower than usual, the rami approaching each other more closely than natural. I had only two drachms of ergot in the house, upon which I poured six ounces of boiling water, and gave it her at the usual intervals; thinking that, if I could succeed in producing an increase of the action of the uterus, the child might be born without having recourse to the use of an instrument. The medicine appeared to have but little effect, although I thought the pains were slightly increased; and in this opinion my friend, Mr. Chandler, of Staines, who was with me, concurred. It was found in this case necessary to deliver with the

forceps, though, from the want of room from pubis to sacrum, I could not fix them in that situation, but was obliged to place them over the occiput and forehead. The perineum, however, was not injured by the instrument. The child was a very large one, and was born dead.

CASE V.

October, 1825, was sent for to Mrs. H—, ætat. twenty-nine, in labour with her third child. I first saw her about twelve at night. The pains were but trifling; the os uteri, however, considerably dilated. The membranes ruptured whilst I was there; the head was very high up, and, as the pains did not increase, I left her. She continued much in the same state all the day, and at five in the evening I gave her two of my usual doses of the infusion of ergot, and, about half an hour after the second draught, the pains were almost incessant, though not so violent as in some cases. At seven o'clock, I prepared a little decoction of ergot, made by boiling one drachm of the medicine in four ounces of water for about ten minutes, and directed one-third to be taken every hour. At half-past eight, the head had partly entered the brim; the patient became restless; the pains continued trifling, and there was a disposition to hemorrhage. Under these circumstances, Dr. Blundell was sent for; and, in consultation, it was agreed to deliver her with the long forceps. The child was born dead.

On examining her abdomen a few days after delivery, I found a considerable enlargement of the right ovarium, which had probably prevented the descent of the head. She had a considerable discharge of blood after delivery.

CASE VI.

October, 1825, saw Mrs. R—, ætat. twenty-eight, in labour with her second child. It was about four in the afternoon when I was first called, and, although she had pains at intervals, still the os uteri was not at all dilated. The liquor amnii was discharged at eight in the evening, when one of my pupils (Mr. Wylie) attended, and waited with her till eleven: finding the labour proceeding very slowly, he then left her. At half-past six the following morning, I was again summoned to the case. I found Mr. W. had been there since four. The os uteri was not completely dilated, but the remaining portion was so soft and yielding, that I apprehended it would afford no resistance, if the uterus could be made to act vigorously. The pains were at this time very trifling, and the intervals between them long. The patient was getting very irritable and fretful. I waited with her an hour, and then determined upon giving the ergot. The first dose (three ounces of the infusion) was given her at seven minutes before eight o'clock: the situation of the

head at this time was partly above brim. Ten minutes after eight, the pains had certainly increased in frequency, though not in force. The infusion was now repeated; and, in about twelve minutes afterwards, it was truly gratifying to witness its effects. The pains were very severe, and returned every two and a half minutes, and a quarter before nine o'clock the head was expelled; the body of the child and the placenta soon followed.

This case was strikingly illustrative of the power which this remedy exerts over the action of the uterus: the increase of the pains was clearly owing to its exhibition; and, instead of being "few and far between," they were almost constant, and their force wonderfully increased. The female and child both did well.

CASE VII.

This case was solely under the superintendence of Mr. Wylie. The patient had trifling pains for nearly thirty hours, the head above brim; she was getting irritable. My stock of ergot was reduced to one drachm, which Mr. W. infused in some boiling water, and gave her. The patient soon complained of an increase of pain, and in about an hour the child was born; which, as well as the mother, did well.

From the above cases, I am led to infer that the *secale cornutum* is a remedy which is capable of increasing the force of the uterine contractions in a most remarkable manner, under certain circumstances; but that the effect is doubtful, unless there be some degree of action present. In other words, that, although it will increase the contractions when already present, it will not always renew them when they are suspended.

That the effect is more certain if the infusion be of greater strength than is usually recommended; two drachms of the *secale* to six ounces of water being barely sufficient for the purpose.

That it appears to be a stimulus peculiarly fitted for irritable, and what are generally termed *nervous*, habits.

That the fears entertained by some practitioners of its proving detrimental to the child, are groundless.

But, although it is in general necessary, not only that there should be a disposition for labour, but that this process should have actually commenced, before we can expect the *secale cornutum* to have any effect upon the uterus, still one solitary case has indirectly come to my knowledge, (and I will vouch for the authenticity of it,) where this remedy was given for the purpose of producing abortion in a female about the second month of utero-gestation; and this effect was accomplished in a few hours after its exhibition.

COLLECTANEA MEDICA:

CONSISTING OF

ANECDOTES, FACTS, EXTRACTS, ILLUSTRATIONS, &c.

*Relating to the History or the Art of Medicine, and the
Collateral Sciences.*

*Floriferus, ut apes, in saltibus omnia libant,
Omnia nos, itidem, depascimur aurea dicta.*

ART. I.—*On the Mixture and Adulteration of Wines.* [From the
“*History of Ancient and Modern Wines.*” London, 1824.]

ALTHOUGH there is no positive standard of taste in wines, and the demand for particular sorts is liable to great fluctuation, from the influence of fashion and caprice; yet there are certain qualities which may be deemed essential, and with respect to which all men are agreed. Some persons may like the sweet, others the dry wines; some the light, others the stronger kinds; but no one will choose a flat and insipid vintage, in preference to that which is distinguished by the fulness of its body, and richness of its flavour and perfume; or, when purchasing a supply, will be disposed to overlook the equally indispensable requisites of firmness and durability. These qualities, however, are seldom found combined, except in first-rate wines, which, being grown in very limited quantity, sell at high prices, and are procured with difficulty. Indeed, generally speaking, they may be said to be little known; for many of them, being the produce of private vineyards, are never to be purchased, or, if they are, must be bespoke before the vintage; and, of the remainder, a considerable portion is reserved by the farmer or merchant, for the purpose of mingling with those of inferior quality. Even the secondary wines are not easily to be had pure and unadulterated, but frequently undergo preparation before they are brought into commerce. Of some of these preparations, and of the manner in which they affect the qualities of the commodity, mention has been made in the foregoing chapters. I shall now proceed to inquire more particularly, to what extent they are practised in different countries,—how far they are rendered necessary by the operation of natural causes,—and in what degree they are reconcileable to the rules of fair and honourable dealing.

The number of hands through which wine usually passes before it reaches the consumer,—the great difference of price between the first-rate and the inferior sorts,—and the prevailing ignorance with respect to their distinguishing characters, afford so many facilities and temptations to fraud and imposition in this branch of trade, that no buyer, however great his caution, however just his taste, is wholly secure against them. It is undoubtedly the interest of the grower to raise as large a quantity of the prime kinds as he possibly can; and it is equally the interest of the merchant to gain the favour of his customers,

by furnishing them with wines which give satisfaction. But, let the growers be ever so honestly inclined, they cannot always supply the commodity in as equal and perfect a state as they could wish: for, not to mention those defects in the nature of the soils, which necessarily restrict the production of fine wines within certain limits, there is a continual variation in the qualities of every sort of wine, accordingly as the seasons prove more or less favourable. Good vintages are, in fact, of much rarer occurrence than is commonly imagined; at least, in those countries where the grape does not attain an early maturity. For example, in the Bordelais, the wines of 1819 alone claim superiority among those of the last eight seasons; in the Alto Douro, about ten of the last fifty years have been distinguished by the general excellence of the produce: while, on the banks of the Rhine, the number of propitious years since the commencement of the eighteenth century, does not exceed fifteen. Of the intervening seasons, many have been so absolutely bad, as not to allow the grapes to ripen thoroughly, or to be gathered in such condition as to yield a wine fit for drinking. Under these circumstances, the farmer, or merchant, who has been so fortunate as to save any portion of the better vintages, uses it for the purpose of mingling with such feeble and perishable wines as would otherwise remain unsaleable, and could not be preserved for any length of time in their natural state. Even in good years, however, there are many wines that rank above the ordinary kinds, which will not bear long keeping, or distant carriage, without some sort of preparation. Thus the wines of Torins, in the Mâconnais, although by no means deficient in spirituousity or flavour, retain their quality a much shorter time, and improve less when pure, than when they are mixed with the growths of the neighbouring territories of Chénas and Romanèche, which are of a stronger character, though they fetch only about the same price. On the other hand, it is sometimes desirable to mix the rougher and high-coloured red wines with a certain portion of generous white wine, which softens their harshness, and renders them much sooner drinkable than they would otherwise be; for which reason these mixtures are by many preferred to the purer kinds, which require to be long kept before their full flavour and aroma are developed.

In the Austrian dominions, and other parts of Germany, it was formerly a rule in the wine trade, that, along with every cask of good wine, the buyer should, at the same time, be obliged to take one of inferior quality. This regulation, though calculated to relieve the grower from much risk and trouble, and occasionally to enable individuals to secure a cask of choice quality, must, on the whole, have had an injurious influence on the character of German wines; as it, in a manner, compelled the dealers to equalize their stock, by mixing good and bad together, and to send them thus mingled into the market, as the best sorts which the country was capable of producing.

The same thing will happen whenever the demand for any particular class of wines greatly exceeds the supply. The general use of port wine in England, for instance, has occasioned an increased demand for it at Oporto. The London merchant, in sending his orders, generally requests his correspondents to furnish him with wines of superior

quality: but, out of the sixty or seventy thousand pipes annually made in the Cima do Douro, there are, perhaps, scarcely five thousand to which that character will properly apply; and these are not to be found in any one store, but are divided, in different proportions, among the several merchant exporters. The whole number of pipes commissioned for London may amount to twenty-five thousand. Supposing, then, that five thousand pipes of first-rate wine, if they are to be had, should be sent in their genuine purity, it is evident that, to complete the order, twenty thousand of inferior quality must be added; and, as a large proportion of the latter would not bear sea-carriage without some preparation, the shipper is forced to mix them with brandy, which, though it may prevent them from spoiling, renders them, in other respects, worse than before, as it destroys what little flavour they originally possessed. If the two sorts of wine come into the market in the respective conditions just mentioned, the one will be eagerly purchased by all who can afford the price; while the other will find few or no buyers, and will probably remain a useless incumbrance in the cellars of the importer. Or, should the difference of value between the two kinds be so great as to deter the majority of his customers from purchasing the first-rate wine, while the profit to be derived from the sale of the inferior is comparatively trifling, the importer will be induced to withhold the best from the market, and to employ it in raising the quality of the others to that standard which shall enable him to command the highest price for the whole. What the London merchant is here supposed to do, is actually performed by the merchant at Oporto. Unable to answer the call for the finest wines, and knowing, besides, that, if he were to send any considerable portion of them in a pure state, along with the more common kinds, of which the great bulk of the cargo must necessarily consist, he would run some risk of having the latter returned upon his hands; or, at all events, would in future experience much difficulty in disposing of such part of his stock: he accordingly resorts to the expedient of mingling the one with the other, so as to bring the whole to a nearly uniform degree of strength and flavour. The consumers of port, having their palates already habituated to this artificial compound, and being prevented by high duties from repairing to those countries which yield more delicate vintages at a cheaper rate, must rest contented with the manufactured liquor; and their only choice lies between the few samples which have accidentally or designedly been allowed to retain somewhat of their original excellence, and those which, from natural badness or adulteration, are nearly deprived of all pretensions to the character of wine. If it were not that an article sold as genuine really ought to be such, no great blame would attach to the Oporto merchant on this occasion. He only pursues the course which is most conducive to the advancement and permanence of his trade. Nor can those who think themselves obliged to imbibe daily a certain quantity of port wine reasonably complain, if he provides them with a regular and plentiful supply of their favourite beverage, of as good quality as the variations of the seasons, the extent of the orders received, and the other circumstances formerly stated, enable him to send.

In those provinces of France which yield the choicest wines, and carry on the most extensive trade in this commodity, the manner of proceeding is somewhat different. There the first-rate growths being always in much request, and readily finding purchasers at the highest prices, are carefully preserved in their genuine purity. If they were mixed with the inferior sorts, the delicate flavours, for which they are chiefly prized, would be almost entirely destroyed; and the value of the compound would not compensate the sacrifice it required. The French merchants, therefore, keeping their finest wines pure, use only the secondary kinds, especially those which possess much spirit and body, for mixing with such as are of too thin and feeble quality to answer the purposes of commerce. In this way a considerable portion of the ordinary wines of Medoc, and other parts of the Bordelais, are rendered fit for exportation, and come to us under the name of *claret*; bearing about the same relation to the prime growths of the Gironde that common port wine bears to the finest produce of the Alto Douro. As this species of compound is in general demand, and the district does not afford a sufficient quantity of the stronger kinds for the manufacture, the dealers (as I have already had occasion to mention,) are obliged to supply the deficiency by large importations from the more southerly provinces of France, and even to have recourse to the thick and heavy vintages of Spain, which, though deficient in flavour, possess the other requisite qualities. In making these mixtures, the object of the Bordeaux merchant is not to imitate the produce of the first-rate vineyards, which he certainly could not accomplish, though he were to attempt it,—but merely to correct the defects of the common wines of the country, and to enable him to export them in larger quantities than he could otherwise pretend to do. The indefinite term *claret* does not pledge him to furnish wine of any particular growth; and, if he only sells what goes by that name at a moderate price, the light wines of Medoc, strengthened and improved in flavour by an addition of Hermitage, may well satisfy his customers: but, if he vends the compounded liquor as the genuine produce of Latour or Château Margaux, and exacts the price of a first-rate vintage, he resorts to an artifice, which will not succeed with the skilful, and ought not to be practised against the inexperienced.

Although the same observations will, in general, apply to all attempts to counterfeit the choicer wines, yet there are certain kinds, to the distinguishing qualities of which a somewhat nearer approach may be made by artificial admixtures. Of this description are the luscious sweet wines, the flavours of which, though often very powerful, are less delicate than those of the red class; and are, besides, to a certain degree, obscured by the undecomposed saccharine matter in which these liquors abound. It is probably owing to the last-mentioned circumstance, or to the similarity of the grapes from which they are made, that many of them, though raised on different soils, resemble each other so closely, as to render their discrimination a matter of some nicety. Several of these analogies have been pointed out in the course of the preceding chapters; and they sometimes occur in cases where we should least expect to find them, as, for instance, in the *vin de paille*

of the Hermitage, which comes so near to white Constantia in all its qualities, that it might be readily mistaken for that celebrated growth. It is also worthy of remark, that, in proportion as the luscious wines advance in their age, their characteristic differences are less perceptible. Thus, Cyprus wine, which every one can recognise, when new, by its tarry taste, gradually loses this disagreeable quality, and becomes at last hardly distinguishable from the thick sweet wines of other countries; and the produce of the Frontignan vine, which, of all the muscadine kinds, possesses at first the most marked taste and perfume, has been found to acquire, by long keeping, the exact flavour of Malaga. These various coincidences probably suggested the idea of forming such imitations of the rarer and more costly varieties of dessert wines, as might serve as substitutes for them in those countries where the genuine kinds are seldom met with. We have seen that the Romans contrived, by means of artificial compounds, to supply the place of some of the most esteemed Greek wines, with which, until about the time of Julius Cæsar, they were but scantily provided. The increasing consumption of the capital held forth great encouragement to this species of manufacture, in all parts of the empire where wine was an article of commerce; and it is not a little remarkable, that the same territory which furnished the inhabitants of ancient Rome with an ample store of fictitious and adulterine liquors, should still carry on the same trade to the greatest extent. The abundance and variety of muscadine and other rich growths, obtained from the vineyards of Languedoc, give peculiar facilities for the preparation of these spurious wines, of which the dealers in the chief commercial towns of that province have industriously availed themselves. A considerable part of the *picardan*, and other inferior vintages, is appropriated to this purpose; and it is from the laboratories of Certe that great part of those specious compounds issue, which are consumed chiefly by the Germans, and other northern nations, under the names of Malaga, Alicante, Madeira, &c.

If we look into those receipt-books which are in every one's hands, we shall find that the rules given for the making and imitating of wines with other fruits than the juice of the grape, are chiefly applicable to the sweet kinds. The excess of sugar used in the preparation of these liquors serves to cover the coarse and harsh flavours of the other ingredients; and the manufacturer generally finds it expedient to leave a large portion undecomposed. Were he to prolong the fermentation until a dry wine was produced, it would, in most instances, be found quite intolerable.

As the mixing of foreign wines affords great opportunity for frauds on the revenue, as well as for the introduction of a variety of deleterious compositions which are designed to pass for wine, but have nothing in common with it except the name, the practice has been strictly prohibited by legislative enactments. In the reign of Edward III. we find a law, directing that assay of all the wines imported should be made, at least twice a year, in every town; and that such as were found to be spoiled or corrupted should be cast out, and the vessels in which they were contained broken in pieces. It appears, indeed, somewhat doubt-

ful whether the expressions "*purrez ou corrupuz*," in the original, have reference so much to the sophistication, as to the natural corruption of wines: but, that the vintners of that time were guilty of various malpractices, may be inferred from the terms of the preamble, which charges them with selling wines, "*auxiben purrez comme seyns*," at arbitrary and exorbitant prices, to the great injury of the public. By the 12th Car. II. cap. 25, sect. 11, it is ordered, "That no merchant, vintner, wine-cooper, or other person, selling or retailing any wine, shall mingle or utter any Spanish wine mingled with any French wine, or Rhenish wine, cyder, perry, stummed wine, honey, sugar, syrups of sugar, molasses, or any other syrups whatsoever; nor put in any isinglass, brimstone, lime, raisins, juice of raisins, water, nor any other liquor nor ingredients, nor any clary, or other herbs, nor any sort of flesh whatsoever;" and that merchants or wine-coopers so mingling their wines shall forfeit one hundred pounds, and the vintners forty pounds, for every such offence. This statute, which may serve to show the heterogeneous nature of the ingredients commonly employed by fraudulent dealers, is however far too indiscriminate in its prohibitions; as it precludes the merchant and vintner not merely from using various materials for heightening and altering the flavours of their wines, but even from having recourse to such substances as are generally acknowledged to be necessary for giving them that brightness and purity, without which they will neither find ready purchasers, nor keep for any length of time. Though repeatedly called into operation as far as concerns the mixture of liquors, I am not aware that it ever has been enforced against any of the other processes; but that, upon the whole, it has had little effect in stopping the manufacture of fictitious wines, is a matter of just lamentation. The increased demand for particular kinds of foreign wine,—the difficulty of procuring the best growths in sufficient abundance,—the high duties successively imposed on the introduction of the genuine commodity, and various other circumstances affecting its supply and consumption,—have all tended to encourage the manufacture of spurious sorts in this country. That the quantity drunk under the names of Port and Madeira especially, far exceeds the quantity imported, has long been notorious. The account given by Addison of the practices of the wine-brewers in his time, which, though somewhat highly coloured, there is no reason to suppose exaggerated with respect to the more important particulars, proves how completely they set at nought the interdict above cited. "There is," says that writer in one of his periodical essays,* "a certain fraternity of chemical operators, who work underground in holes, caverns, and dark retirements, to conceal their mysteries from the eyes and observations of mankind. These subterraneous philosophers are daily employed in the transmutation of liquors, and, by the power of magical drugs and incantations, raising, under the streets of London, the choicest products of the hills and valleys of France. They can squeeze Bordeaux out of the sloe, and draw Champagne from an apple. Virgil, in that remarkable prophecy,—

* Tatler, No. 131.

Incultisque rubens pendebit sentibus uva—

‘The ripening grape shall hang on every thorn,’—

seems to have hinted at this art, which can turn a plantation of northern hedges into a vineyard. These adepts are known among one another by the name of wine-brewers; and, I am afraid, do great injury, not only to her majesty’s customs, but to the bodies of many of her good subjects.”

The same manufacture still flourishes; but the reduction of duty on Cape wines enables the adepts of the present day to employ, as occasion may require, a more substantial and convenient menstruum for their preparations, than that formerly used. By mixing these wines with the lees of other kinds, and tinting and compounding them with various drugs, they endeavour to counterfeit the more costly vintages of Spain and Portugal, and even of France; but, though they may sometimes succeed in imposing on the unwary, the predominant flavour of the produce of the Cape, which, with all their art, they can seldom conceal, generally betrays the nature of the mixtures, and renders them as unpalatable as they are unwholesome and worthless. The high impost on the choicer wines, however, holds forth so strong a temptation to embark in this disreputable trade, that we must lay our account with its continuance, until the return to more moderate and equal rates shall remove the causes from which it has chiefly sprung.

It has been observed, that, by the statute of Charles II., several substances are forbidden to be mixed with wine, which in themselves are not only innoxious, but deemed conducive to its purity and right preservation. In this respect our laws are not singular. The ordinances of the Imperial Diets are conceived in the same spirit; denouncing the use of lime, gypsum, sulphur, and even milk, and passing unnoticed the more censurable adulteration with lead: in conformity, as it would seem, to the prejudices of the ancients, who, not suspecting the dangers of the practice, often boiled their wines in leaden vessels, while they regarded the admixture of other mineral substances as highly injurious to health. At what period, or in what country, the deadly practice of adding litharge to acescent wines was introduced, is uncertain. Beckmann inclines to the opinion that it originated, or at least was first detected, in France; the earliest mention of that species of sophistication being found in an ordinance of the French police, which bears the date of 1696. That it had been known for some time previously, may, however, be inferred from the fact that, in the same year, several individuals in the duchy of Wirtemberg were poisoned by drinking wine sweetened with ceruse, of the employment of which the dealers made no secret; appealing to the authority of certain learned physicians, who pronounced the practice to be harmless, and sanctioned it by their own example. This defence did not allay the alarm. An inquiry was ordered into all the circumstances of the case; and, by the advice of the court physicians, who assured the government that both litharge and sulphur, but especially the latter when combined with bismuth, were exceedingly unsafe ingredients, the use of these substances in the preparation of wine was thenceforth

declared to be a capital crime. In the following year, some offenders against this law were punished by banishment or hard labour; and a wine-cooper at Eslingen, who afterwards ventured to revive this nefarious trade, and had induced several persons, in various places, to follow it, was condemned to lose his head, while the possessors of the adulterated wines were severely fined, and the wines themselves thrown out.

This mode of curing, or rather disguising, acidity in wines, is unfortunately not altogether unknown in this country; but there is reason to believe that it is seldom or never resorted to, since the dealers have become apprised of its dangerous consequences. There is, indeed, little occasion for such a remedy in the case of the full and strong vintages, with which we are so abundantly supplied from Spain, Portugal, and Madeira. If employed at all, it can only be for the purpose of correcting the harshness incident to some of the lighter white wines, such as those of the Rhine, Moselle, or the Cape, and the inferior kinds of Teneriffe. When these wines have an unusual degree of sweetness, a darker colour than their age and body seem to warrant, and particularly when the use of them is followed by pains of the stomach, we may presume that they have been adulterated with lead. The presence of that mineral may be easily detected by adding to such wines a solution of the hydrosulphuret of potash, or water impregnated with sulphuretted hydrogen gas, which gives a black precipitate. The prussiate of potash is occasionally employed for the same purpose; a drop or two being sufficient to show a white or greyish precipitate in any fluid in which lead is contained.

According to some authors, lead is not the only poisonous metal used in the preparation of wines. The Spaniards are charged with having had recourse to arsenic, and even to corrosive sublimate, in order to fine their vintages, and render them more firm and durable; and the Dutch, also, are said to have prepared in the same manner such French wines as they shipped for their colonies. If these accusations be not unfounded, we may well exclaim with Pliny, "How can wine possibly prove innoxious, when it is mixed with so many destructive ingredients?"

Such, however, is the influence of custom in reconciling the palate to certain tastes, that wines are sometimes rendered more saleable by having qualities imparted to them, which in themselves are absolutely repulsive. We are apt to question the refinement of the ancients, who could relish the adventitious bitterness given to the produce of the vines, by means of pitch, rosin, and salt water; and yet are please with the coarse acerbity and astringency which port wine occasionally receives from the addition of alum, sloes, or oak-bark. We disdain the combination of odoriferous herbs, with which they scented their inferior wines; while our own are not unfrequently perfumed by an admixture of nitrous ether.

As a high colour is generally, though sometimes erroneously, considered a criterion of the excellence of particular wines, and as the vintages of unfavourable seasons are almost always deficient in this

particular, it is frequently supplied by artificial means. For this purpose a variety of colouring matters are employed, such as the elder-berry, wortle-berry, privet, beet-root, tounesol (*croton tinctorium*), logwood, Brazil-wood, &c.; all of which, though they may improve the tint, deteriorate the flavour and durability of the wine. It is well known that port wines used to be prepared in this manner; and, though the company of the Alto Douro may have succeeded in extirpating the elder-tree from the district, yet they left the pokeweed (*phytolacca decandra*), the fruit of which has been found to answer equally well. The colour imparted by such materials, however, is seldom a pure red, but approaches more to violet, unless when heightened with alum; and the fraud is apt to betray itself by the flat and herbaceous taste which the liquor acquires. According to Cadet, this species of adulteration may be always easily detected by pouring into the suspected wine a solution of sulphate of alumina, and precipitating the alum by potash. If the wine is pure, the precipitate will have a bottle-green colour, more or less dark, according to the natural hue of the wine. Thus, the wines of Roussillon and Languedoc exhibit a dark green; those of Burgundy a bright green; and the *vin de pays* a green approaching to grey. If, again, the colouring has been artificial, the following will be the results:—

Tounesol	will give a precipitate of	a bright violet colour.
Brazil-wood	—	a brownish red colour.
Elder-berries, or privet	—	a brownish violet colour.
Wortle-berries	—	the colour of dirty wine-lees.
Logwood	—	a lake-red colour.

Vogel recommends the acetate of lead for the same purpose; having remarked that, of the substances used for colouring wines, none will form a greenish-grey precipitate, like what is obtained from the genuine kinds, by means of the acetate. But the simple test pointed out to me by my friend, Dr. Prout, is equally satisfactory, and may be applied to the white as well as to the red kinds. On adding ammonia to wines which had the appearance of being genuine, he observed that the precipitate was of an olive-green colour; showing the analogy between the colouring principle and the vegetable blues, most of which are rendered red by acids, and green by alkalies. This conjecture is in some measure confirmed by the recent discovery of M. Breton, professor of chemistry at Paris, with respect to the cause of that disorder in wines known by the name of *tourneure*. Wine thus affected acquires a disagreeable taste and smell, loses its red colour, and assumes a dark violet hue; which changes are found to proceed from the presence of carbonate of potash, in consequence of the decomposition of the tartar contained in the liquor. To restore the natural colour and flavour, if the disease be not of long standing, it is only necessary to add a small quantity of tartaric acid, which, combining with the potash, forms cream of tartar, as is shown by the subsequent deposition of crystals. In genuine wines, the colouring matter seems to partake of the character of a lake, partly held in solution by the excess of acid present, and partly combined with the earthy phosphates; for, in the precipitate obtained

from these wines by means of ammonia, it appears in union with the triple phosphate of magnesia. Even the white wines of Xerez, Madeira, and Teneriffe, exhibit this mixed precipitate; their colouring matter being probably derived from the red grapes which enter into their composition. In fictitious wines, on the other hand, such as those procured from the black currant, gooseberry, orange, &c. the last-mentioned salt was thrown down by ammonia, but more gradually, in less quantity, and without any admixture.

Though the various sophistications, by means of heterogeneous ingredients, are not all equally reprehensible, it is very certain that none of them is calculated to supply or improve the qualities of genuine wine. Even the communication of artificial flavours derived from fruits and aromatic herbs, which is the most innocent of any, is apt to infect the liquor with a medicated taste, which, to a delicate palate, is immediately perceptible. The only legitimate mode of bettering wines, is by the addition of such constituents of the grape as the deficiencies of particular vintages appear to indicate; and they ought to be employed as much as possible during the fermentation, or before the wine is completely formed. To certain kinds, intended for distant climates, the admixture of a small quantity of brandy may be allowable, but never to such an extent as to overcome the original flavour; otherwise we impair their excellence, and risk their partial decomposition. In general, however, it may be observed, that the necessity for all these expedients will diminish as the culture of the vine improves, and as more skilful methods are adopted in the treatment of its produce. Every one will grant that prevention is better than cure; but in wine-making, as in other arts, this maxim is too much neglected. I may add, that the anticipated improvement will be greatly accelerated by the removal of those restrictions on trade which prevent us from frequenting the best and cheapest markets for wine, and compel us to receive so many cargoes of indifferent quality; at the same time that they tend to promote the manufacture of spurious compounds, and to encourage all manner of adulteration.

CRITICAL ANALYSIS
OF
ENGLISH AND FOREIGN LITERATURE,
RELATIVE TO THE VARIOUS BRANCHES OF
Medical Science.

*Quæ laudanda forent, et quæ culpanda, vicissim
illa, prius, cretâ; mox hæc, carbone, notamus.*—PERSIUS.

DIVISION I.

ENGLISH.

ART. I.—*An Introduction to the Use of the Stethoscope; with its Application to the Diagnosis in Diseases of the Thoracic Viscera: including the Pathology of these various Affections.* By WILLIAM STOKES, M.D.—12mo. pp. xiii. 226. Edinburgh: Maclachlan and Stewart, 1825.

WHEN LAENNEC's valuable work appeared some years ago, the readers of this Journal were made acquainted with it in various elaborate reviews. We at that time obtained a stethoscope, (one of the first which was brought to this country,) and endeavoured to judge for ourselves of its merits in assisting diagnosis. The result of our trials was not favourable; but we were cautious in forming an opinion, as we conceived that our not distinguishing with precision all the sounds described by Laennec, might have arisen from some personal defect in the sense of hearing. During the five or six years which have intervened, several works have been written on the subject, both abroad and in this country; the last, and one of the best, of which we have selected, for the purpose of again calling the attention of our readers to the subject. This we do, not so much from having altered our own opinions, as from regarding it to be our duty to make those who peruse our Journal acquainted with the best works of the day, and put them in a situation to judge for themselves of the validity of the doctrines they contain. That the author before us entertains very different opinions of the utility of the stethoscope, it is almost unnecessary to say; for the work is even dedicated to a gentleman, on account of his having paid "unremitting attention to the light which mediate auscultation is now throwing on the obscurity of the disease;" and, in his Preface, he continues—

"I might here enter into a long dissertation on the utility of the stethoscope, but such is not my intention. It is a common objection to the use of this instrument, that it leads to no practical results, and

therefore that it is more useful to the pathologist than to the physician. But those who make use of such an objection, only betray their ignorance of the use of the stethoscope, and, like unjust judges, pronounce sentence without examining into the merits of the case. The stethoscope, besides its vast importance in the diagnosis of a most difficult class of diseases, does lead to many useful practical results. Let us take the cases of pneumonia and of pleurisy, two of the most common and severe affections of the thoracic cavity, where a daily examination by means of the stethoscope points out the progress of the disease, its exact seat, the effect of our remedies, the necessity of their repetition, or the utility of their omission. In circumscribed pleurisy, in wounds of the thorax, its utility is undeniable. From ignorance of its application, displacement of the heart, arising from a pleuritic effusion, has been mistaken for dilatation of that organ, while the original disease was entirely overlooked. Pleurisy has been mistaken for rheumatism, and a critical diaphoresis has been checked in pneumonia. In confirmed phthisis, when the hopes of the sufferer's friends are excited by an ignorant practitioner, the physician, with the aid of the stethoscope, has at least the melancholy advantage of saving to those friends the pangs of disappointed hope, and to the patient himself the torture of useless remedies. By means of the stethoscope we can detect latent inflammatory affections of the pulmonary organs, long before they have become evident from their external symptoms. These are cases where a practitioner ignorant of mediate auscultation would be completely at a loss. I could adduce a host of other instances, but refrain from doing so, in the firm conviction that such will not be required by any one who has used the stethoscope in ten cases of thoracic disease. Even without reference to actual disease, is it not a great practical advantage that, in doubtful cases, we can explore the hidden recesses of the thorax, and say with confidence to our patient, *There is no disease here?*" (P. x. —xii.)

In this paragraph, the first illustration of the practical utility of the stethoscope consists in its application to pleurisy and pneumonia, in which diseases, we are told, it points out the exact seat of the inflammation—its progress—the effect of the remedies, and the necessity of repeating or omitting them. Now, without denying that the instrument may occasionally be useful in the diagnosis of obscure cases, we must protest against the absurdity of attributing to it powers which can only result from practical experience, grounded on general therapeutic principles. In cases of pneumonia and pleurisy, every practitioner is, or ought to be, able to judge sufficiently of the seat of the disease, from its symptoms; while he who trusts to any other guide, in the administration of his remedies, than the functional and constitutional derangement of his patient, may possibly be a good pathologist, but will certainly make a very sorry practitioner. Its utility in wounds of the thorax is said to be "undeniable;" we shall not, therefore, venture to

dispute it: but, with regard to the next illustration, that displacement of the heart from effusion may be mistaken for dilatation of that organ, it is obviously a possible case only, and not a probable one. We can only say, that the man who made such a mistake without the stethoscope, would be very likely to fall into the same error with it. "Pleurisy has been mistaken for rheumatism." Very possibly; and, where the symptoms are such as to render the application of the stethoscope necessary to distinguish them, we advise our readers still to treat the case as one of pleuritic inflammation—say the stethoscope what it may. Lastly, we come to "confirmed phthisis;" and here the recommendation of the instrument is more equivocal than in any of the preceding cases. It is supposed that "an ignorant practitioner" misleads the friends, and tortures the patient with "useless remedies." Under these circumstances, "the physician, with the aid of the stethoscope," detects the disease, and consequently the inutility of "useless remedies." Now, Dr. STOKES surely must admit, that a physician, who is not "ignorant," would make both of these notable discoveries quite easily without the stethoscope. That man must be ignorant indeed who requires any such assistance to detect a case of "confirmed phthisis." Yet we object not to this manner of stating the question, for we believe that it is in general the true one. We mean that where any decided superiority is shown by the "physician with the aid of the stethoscope," it is when (as in the case here supposed) he is placed in opposition to "an ignorant practitioner."

We are next told that, by means of this instrument, we can detect latent inflammatory affections, before they become manifest to our ordinary means of scrutiny: this, if true, is a decided advantage. We do not positively deny the position, but we doubt it: at present it stands as an assertion, without sufficient proof. Not long ago, a physician in this metropolis, who patronises the stethoscope, mentioned a case of hydrothorax, in which he had discovered the effusion by means of this instrument. He was asked, Had the patient any difficulty of breathing? Yes.—Could she lie flat in bed? No.—Any purpleness of the lips? Yes.—Any swelling of the ankles? Yes.—Any scantiness of the urine? Yes.—Then, rejoined the querist, the only difference between us is, that I should have formed the same conclusion without the stethoscope which you did with it.

But LAENNEC is always referred to, and his extraordinary skill in thoracic complaints triumphantly quoted, as setting all arguments at rest. But this illustration makes nothing in favour of the stethoscope: in our opinion, indeed, it is against it; for it is to be remembered that Laennec was a great pathologist

before this instrument was heard of, and, instead of the stethoscope giving to him the knowledge he now possesses, he gave to it the reputation derived from thirty years' assiduous and successful cultivation of pathology, and all the diagnostic acumen necessarily resulting therefrom.

We are quite aware that our scepticism will be laid, by the friends of mediate auscultation, to the charge of our ignorance. Be it so: but at the same time we must claim the privilege, in our turn, just to hint at the Tale of the Tub; and we must add, ("not to speak it profanely,") that our northern neighbours, who are marvellously smitten with this discovery, have always been rather partial to tubs. It is justly observed by Dr. Stokes, that, "in the history of mankind, it will be found that no great discovery, or probable conjecture, was ever promulgated, without encountering the most bitter opposition." Our opposition, however, is not bitter; but merely the legitimate misgivings of men who have tried the instrument, who have seen others try it, who have read what has been written upon the subject, who have conversed with those whom they regarded as better qualified to judge than themselves,—the result of all which has been a doubt whether a practitioner of the ordinary range of education, talent, and experience, cannot detect diseases of the chest as well by the means heretofore adopted, as one who places his confidence in mediate auscultation. We shall, however, give to our readers the benefit of the doubt, and lay before them the most important parts of Dr. Stokes's work, which, we repeat, is clear, concise, and unassuming.

Percussion occupies the first portion of the volume.

"The sound heard upon striking the chest is always proportional to the size of this cavity, and the thickness and elasticity of its parietes. It varies according as we strike on a point covered with soft and thick parts; according to the state of emaciation or infiltration of the cellular substance, the posture of the patient, the part struck, and the manner of practising the percussion.

"A clear sound, which has been compared to that produced by striking an empty barrel, is obtained anteriorly when we strike on the clavicles, on the space two or three inches below them, on the entire surface of the sternum, and the neighbouring parts of the costal cartilages.

"Laterally, the axilla, and the space for three inches below it, are the places where the clearest sound is obtained: on the right side, from the fourth rib, and sometimes even the third, to the inferior part of the chest, the sound becomes less clear on account of the vicinity of the liver; while, on the left, it is often clearer from the proximity of the stomach, especially when this viscus is distended with air.

"Posteriorly, by striking on the line of the costal angles, and, in thin subjects, on the spaces superior or inferior to the spine of the sca-

pula, and also on the spine of the scapula itself, a clear and distinct sound is obtained ; but we learn nothing from using percussion on the thick muscular bed which fills the vertebral grooves.

“ It is almost unnecessary to mention that, *cæteris paribus*, the chest of an emaciated person will be more sonorous than that of an individual loaded with fat, or whose muscles are large and soft. In a patient labouring under infiltration of the cellular substance of the thoracic parietes, no conclusion can be drawn from percussion. It is necessary, in order to hear and judge of the sound from percussion, that the patient shall be placed sitting in his bed, and that the part which we wish to examine shall be stripped of all clothing. In examining the anterior part of the chest, the arms are to be held backwards ; when it is the posterior, they are to be crossed upon the chest, and the patient is to bend forwards. The object of these different positions is to stretch the muscles which cover the parietes of the thorax.

“ In order that percussion, apparently so simple an operation, shall lead to truly useful results, a great number of precautions are necessary. In the first place, the fingers are to be held in a state of demi-flexion ; their extremities should be in the same line ; the operator is to strike with an equal and moderate force on similar parts, and in the same manner,—that is to say, letting the extremities of the fingers fall perpendicularly on the part under examination.

“ A too strong percussion excites pain, an unequal one gives results unworthy of confidence : this will also happen if we strike on dissimilar parts,—as, for instance, alternately a rib and an intercostal space ; or if the fingers are held in different positions at opposite sides. It is also necessary not to examine at once all the points on one side, before passing to the examination of the opposite one, as we are thus liable to forget the particular results which we may have obtained ; it is better to examine in turn the corresponding parts of each side.

“ The alterations of sound which take place in disease, may be reckoned as three in number,—viz. dull, obscure, or clearer than natural ; in some cases the sound is wanting altogether. Whenever the lung loses its elasticity, and becomes engorged, without however entirely losing its permeability, the sound will become dull or obscure, according as the sanguineous infiltration of the pulmonary tissue is more or less considerable. This alteration is produced by the first degree of pneumonia, and by œdema of the lung. The sound disappears altogether in two cases ; first, when the lung loses its permeability, from the abundant exhalation of blood into the areolæ and the interlobular cellular tissue, thus becoming dense, and resembling much the appearance of a portion of liver ; and, secondly, when it is compressed and pushed inwards, either by some growth accidentally developed in its own substance, or in the cavity of the pleura ; or when the latter is filled by any liquid.

“ In these cases, a greater or less portion of the side affected still retains its sound on percussion, according as the hepatisation, accidental tumor, or effusion, may be more or less considerable.

“ The sound is louder than in the state of health, when (if I may be

allowed the expression) the pulmonary tissue is rarefied, as in emphysema, or when the cavity of the pleura is filled by air or other gaseous fluids." (P. 3—7.)

It is acknowledged, however, by M. Laennec, and probably not denied by any of his followers, that percussion affords but a very imperfect index to the state of the thoracic viscera. It gives no mark by which pneumonia, pleurisy, or hydrothorax, can be distinguished from each other; while, in pneumothorax, it is confessed to be a source of almost unavoidable error. It is of no avail in diseases of the heart or great vessels; and even in phthisis is generally useless, and always proves insufficient to distinguish this from chronic pneumonia. Lastly, the integuments of the chest being œdematous, or fat, or flaccid, destroy the results.

Auscultation is defined by Dr. Stokes to mean an examination of the sounds which various causes "produce in the cavity of the chest:" this, however, is an incorrect limitation of the term, as auscultation expresses simply the act of examining by the ear, and has been applied to detecting the existence of fracture when the crepitus is indistinct, to ascertaining the existence of the fœtus in utero, and may possibly be applied to other purposes. The examination is seldom conducted by the direct application of the ear to the part, and, as some body is interposed, it has been called *mediate auscultation*,—rather a formal and affected appellation: the stethoscope is the instrument used; and, as most of our readers are aware, it consists of a cylindrical piece of wood, about a foot long, an inch and a half in diameter, bored longitudinally by a tube three lines in width; at one end is a conical excavation, supplied with a stopper. There is no mystery in making them, and they are now to be had at most of our surgical instrument makers. In using the instrument, we are directed to hold it as we do a writing pen, and to apply it flat upon the part, filling up with lint any inequalities, as from the projection of the ribs in a person much emaciated. When the force of the heart, or the phenomena of the voice, are to be examined, the instrument is to be furnished with its stopper; but this is to be removed when our scrutiny regards the respiration, or the sounds produced in certain diseases of the heart.

Before we attempt to recognise diseased conditions by this instrument, it is obviously necessary that we be acquainted with the phenomena attending a natural state of the functions: these accordingly are first described.

"The sound of respiration varies, first, according to the different parts of the chest examined; secondly, the frequency of respiration; and, thirdly, the particular conformation, the age or sex of the individual.

"When we apply the stethoscope to the chest of a healthy person, we hear, during respiration, a slight but very distinct murmur, which indicates the penetration of the air into the cells of the lung, and its expulsion.

"This murmur is nearly equally strong at every point of the chest, but especially where the lungs are nearest to the surface; that is to say, in the superior lateral and postero-inferior parts. The axilla, and the space comprised between the clavicle and edge of the trapezius, are the points where it is heard with the most intensity; over the larynx, the trachea, and root of the lungs, the respiratory murmur is distinctly heard; but it has a particular character, which causes us at once to perceive that the air is passing through a canal of greater diameter than the cells of the lung. In these situations we do not distinguish the expansion of the pulmonary tissue, and the air seems, during inspiration, to be drawn in through the cylinder,—during expiration, to issue from it. The sound of this respiration, which is called tracheal, may be exactly compared to that produced by a pair of bellows.

"The sound of respiration is more distinct as the latter is more frequent. A slow and deep inspiration is sometimes scarcely heard; hence it is often necessary to desire those whom we examine to breathe quickly and strongly.

"In children, women, and men of an irritable habit, the respiratory murmur is distinct and sonorous; the expansion of the cells is more perceptible, and the sensation is such, that they appear to be more dilated than in the lungs of a healthy man. This difference of sound is perceived most during inspiration. We find it also better marked as the person is younger. It generally remains until puberty, or a little beyond that age. In adults, the intensity of the respiratory murmur varies much; there are many healthy persons in whom it is scarcely heard, unless when they make a strong inspiration: in these cases the respiration is generally frequent. In some individuals, on the contrary, it is distinct, and even similar to that of infants; and these persons seem more disposed to diseases of the pulmonary organs." (P. 14—16.)

The author next enters at considerable length into a description of the pathological phenomena of respiration, in which its frequency and infrequency, quickness and slowness, regularity and irregularity, &c. &c. are minutely detailed. We take leave to pass this over, as not constituting the more immediate object of our present analysis, and take up the thread of the story again where the history of the stethoscope is resumed, as relating to the *respiratory murmur*.

"The sound or murmur of respiration may be stronger or weaker than in the natural state; altogether inaudible, or similar to that produced by the passage of the air through the trachea. It may be cavernous, as when the air passes into an excavation in the lung; and, lastly, it is heard combined with the different rales.

"When the respiratory murmur is stronger than in the natural state, it bears a great similarity to that of children; and on that account has

been termed by M. Laennec, puerile respiration. This augmentation of the sound of respiration is not caused by any morbid alteration of the lung at the part where it is heard. It is observed in healthy parts, whose action is, as it were, increased for a time, in order to make up for that of the diseased portions.

“Puerile respiration is met with in one lung, when the other has lost its permeability, as from inflammation, tubercular development, &c. It is heard in pulmonary catarrh, after the re-appearance of the murmur of respiration, and in some cases of asthma and hysteria; but here it is combined with the most distressing dyspnoea. When a lung is but partially affected, puerile respiration is heard in the sound portions.

“The weakening or diminution of the respiratory murmur can only be ascertained by its examination at different parts of the chest, for it seldom happens that respiration is weakened in both lungs at once, or even in the entire of one. The intensity of murmur varies from the smallest diminution to the most complete nullity; its diminution may arise from many causes: thus it is produced by the incomplete obstruction of the minute bronchial ramifications, arising from thickening of their membranes, or the presence of mucus; it may occur also when there is an abundant crop of tubercles disseminated through the pulmonary tissue. We find it in pleurisy, while the false membranes are yet soft, and only beginning to be organised; and, lastly, it may arise from the diminished action of the thorax itself.

“The diseases in which we meet with absence of the respiratory murmur over a more or less considerable portion of the lung, are—pleurisy, accompanied by effusion; pneumonia, in its advanced stages; emphysema; pneumothorax; and pulmonary catarrh.” (P. 24—26.)

From this quotation it will be perceived, that the respiratory murmur is either pure or combined with certain other sounds called *rales*; a French word for which we have no perfect synonym, although *rattle* comes nearer than any other. Adopting the term *rale*, however, as it is to a certain extent naturalised, we find it defined to be meaning “any sound produced by the circulation of air through the bronchial tubes and pulmonary vesicles, differing from the natural respiratory murmur.” Of these sounds there are four,—viz. the *crepitating*, the *mucous*, the *sonorous*, and the *hissing*.

The *crepitating rale* is compared to the crackling of salt when decrepitating, or that of a portion of dry lung when pressed between the fingers. It is supposed to depend upon increased determination to the air-cells, and thus becomes a pathognomic sign of the early stage of pneumonia; while, however, it likewise occurs in œdema of the lung, and in pulmonary apoplexy. In pneumonia, the rale does not at first conceal the respiratory murmur, but after a time, as the inflammation advances, it overpowers the natural sound of respiration. When the disease is about to terminate in resolution, the rale becomes more distinct, acquiring a humid character, while the respiratory

returns ; but, if the disease be running into hepatisation of the lung, the natural murmur is not resumed.

In œdema of the lung, the rale is analogous to the former, but less in degree ; hence it has been called *sub-crepitating*.

In pulmonary apoplexy, the rale is present in circumscribed portions of the lung, while the natural sound is heard in the intervening spaces. After a time, the rale, from crepitating, becomes *mucous*, which leads us to speak of this modification of sound.

The *mucous rale* is best understood by the common illustration of the "rattles" in the throat of a dying person ; this being the kind of sound, although, when confined to the minuter ramifications of the bronchiæ, it is much less intense. It appears to depend upon bubbles of air entangled in fluids of greater or less viscosity, and is closely allied to the crepitating rale ; so much so, indeed, that Dr. ANDRAL regards them as different varieties of the same sound, depending on their situation. Thus, we have a distinctly gurgling sound in the larger tubes ; a crepitating sound in those which are minute ; and something intermediate between the two in the intervening spaces. The mucous rale is characteristic of pulmonary catarrh in its advanced stage, and, in fact, of every disease of the lungs in which there is increased secretion from the mucous membrane of the bronchial tubes. It occurs in pneumonia in all its stages, and is extremely distinct (constituting the "gargouillement" of the French,) in phthisis, when softening of the tubercles has taken place. In pulmonary catarrh the rale is at first sonorous, and does not become mucous till the disease has made some progress ; it is partial, unless the case be severe, when it may be heard over one entire lung. If present over the whole of both, the case is generally fatal.

Dr. Stokes, in the portion of his volume which follows, gives a very good description of the pathology of pneumonia ; but our business is with the stethoscope ; and, as this part of the subject is closed by the relation of two cases, "admirably" illustrative of its use, we shall insert them in full, with the author's comments, and then add a very few of our own.

"The following cases of pneumonia are admirably illustrative of the use of the stethoscope in this disease : indeed, in the second, without the use of this invaluable instrument, nothing could have been known about the true nature of the disease. The first, with its supplementary observations, is from the work of M. Andral, already quoted ; the second formed the subject of an excellent thesis by M. Lenormand.

"CASE I.—A carpenter, aged thirty-two, was seized with a violent shivering on the night of the 20th of April, 1822. On the morning of the 21st, he felt a pain first occupying the top of the left shoulder, *but which soon extended over the whole left side of the thorax ; it was*

augmented by coughing and by deep inspirations ; and, when he lay on the left side, it became insupportable. He had a dry cough, and sweating in the evening. During the seven following days he kept his bed, and only took some emollient drinks. On the evening of the 27th he entered the hospital, was immediately bled ; and during the night was delirious. On the morning of the 28th, he had *short and hurried inspirations ; frequent cough, with a considerable quantity of transparent, viscid, and sanguinolent expectoration.* The pain, less acute than on the preceding days, was felt, on percussion, over the left side from the axilla to the last ribs. He lay on his back. Upon percussion, the sound was dull, laterally and posteriorly, over nearly the whole of the inferior lobe of the lung. In this situation a slight crepitating rale was heard, without any mixture of the respiratory murmur. It was concluded, from these observations, that the inferior lobe of the left lung was partly engorged and partly hepatised.

“ Pulse frequent, strong ; skin hot and moist. The sweatings had continued every evening from the commencement of the disease. Tongue white ; anorexia ; thirst moderate ; constipation.

“ He was bled to twelve ounces, and thirty leeches applied over the left side. He had delirium during the night, which continued the next morning ; but the respiration was easier, the sputa were less bloody, and the crepitating rale much stronger and more extended ; seeming to announce that the hepatised portion of the lung was returning to the state of simple sanguineous infiltration. Less fever. As far as the pneumonia was concerned, the patient was evidently better ; but the delirium proved a cerebral congestion, the more to be feared, as it should have diminished were it sympathetic with the thoracic affection. Enough of bleeding had been practised, as the patient was naturally of a weak constitution. Two blisters were applied to the legs, as revulsives at once from the head and chest. The delirium ceased towards evening, and did not again appear. On the next day he was in the same state. On the eleventh and twelfth days of his disease, the sound of the chest was less dull, and the crepitating rale more distinct. *The patient felt no more pain ; could make a deep inspiration easily ; the sputa, scarcely bloody, had become of the catarrhal character ; moderate fever ;* in a word, every thing proved that resolution was going forward. On the thirteenth day, a blister was placed on the left side of the thorax. During the fourteenth and fifteenth days, the natural respiratory murmur began to be heard, though still mixed with a crepitating rale. Sound of the chest no longer dull ; sputa catarrhal. On the sixteenth day, respiratory murmur more distinct, and only at intervals, and in some points, mixed with the crepitating rale. Pulse still a little frequent, but no other sign of fever. On the seventeenth day, the respiratory murmur was every where distinct and natural. Convalescence.

“ Let us attend to the signs furnished in this case by auscultation and percussion. The sound was at first dull, and the crepitating rale feeble, without any mixture of respiratory murmur : from these signs it was inferred that hepatisation had already taken place. Further on, when the diminished fever, less dyspnoea, the catarrhal state of the

sputa, the progressive return of the sound on percussion, all announced the resolution of the pneumonia: auscultation pointed out the stages of this desirable change, each day indicating the passage of the pulmonary tissue from the state of hepatisation to that of simple sanguineous infiltration. The greater or less intensity of the crepitating rale proved these different states of the lung, with an almost mathematical correctness. If this rale is very strong, without any mixture of the respiratory murmur, we may be certain that the whole of the lung where it is heard is only simply engorged, but that the sanguineous infiltration is very considerable. If the respiratory murmur is heard with the rale, the infiltration is less considerable, and much of the lung is still healthy. Sometimes the rale is heard only in insulated points, at long intervals, or even in a continued manner; but so feeble that it requires much attention and practice before it can be distinguished, and as it were separated from the surrounding murmur of respiration, which increases as the rale diminishes. In this case, the inflammatory action is very slight, or circumscribed.

"At other times, although the crepitating rale shall become more and more feeble, yet the respiratory murmur is not re-established: there is then a passage from the first to the second degree; a mixture of hepatisation and sanguineous infiltration. It is rarely that we find total absence of the crepitating rale, even where the hepatisation is considerable. In the latter case we have the tracheal respiration, and bronchophonia. When the portions of the hepatised lung become permeable to air, it is announced to us by the return of the crepitating rale, or by its greater intensity, if the latter has continued. It is a curious circumstance that, long after the other symptoms of pneumonia have disappeared, the respiratory murmur is still mixed with a little of the crepitating rale. What are we to conclude from this fact, but that the inflamed portions of lung generally return to their natural state in a much slower manner than could have been believed before the discovery of auscultation? Hence the liability to relapse in cases of pneumonia; hence also we may form some idea of the precautions necessary while this rale exists. If these are neglected, the disease, latent in its last periods, may return to the acute state; or, what is more common, the lung may pass into the state of chronic inflammation, terminating in a tubercular degeneration of this viscus, for which the patient may have been predisposed." (P. 45—50.)

In this case we have placed in italics those paragraphs which appear to us to have marked the nature of the disease, its increase in the first instance, and subsequent decline, in a manner so unequivocal, that no man would have thought it necessary to call in the assistance of the stethoscope, unless, like Dogberry, he was resolved "to spare no wisdom." Where is the practitioner so ignorant as to hesitate about the nature or treatment of a disease characterised by pain extending over the whole of the left side of the thorax, augmented by deep inspiration, accompanied by dry cough, and at night by delirium; all this supervening suddenly, and preceded by rigors. Suppose,

however, (what for the sake of argument alone we can suppose,) that any doubt had existed with regard to the nature of the attack, let us observe the symptoms which presented themselves next day: he had now "short and hurried inspirations; frequent cough, with a considerable quantity of transparent, viscid, and sanguinolent expectoration." The pain was "less acute" than on the preceding day; but his pulse was still "frequent and strong." We cannot imagine any train of symptoms more distinctly characteristic of a severe inflammation of the lungs, relieved to a certain extent by the sanguinolent expectoration, but not yet subdued.

Let us proceed. Next day, "the respiration was easier," the sputa "less bloody," and he had "less fever;" and, in a few days more, "the patient felt no more pain; could make a deep inspiration easily;" the expectoration had assumed a "catarrhal character," and the fever was "moderate." We repeat, that he who could not in these symptoms perceive the onset, full development, and gradual decline, of an attack of pneumonia, without the assistance of auscultation, mediate or immediate, deserves not that any confidence should be placed in his opinion, from what source soever it may be derived. Yet this case is given as "admirably illustrative of the use of the stethoscope."

We now come to the second case.

"The following is a remarkable case of acute *latent* pneumonia, accompanied by acute circumscribed *latent* pleurisy of the right side. The disease was promptly fatal, and was constantly marked by violent symptoms of inflammation of the mucous membrane of the intestinal canal, which, upon dissection, was found healthy.

"CASE II.—A man, aged sixty-one years, of a strong constitution, had enjoyed very good health until the 29th of November, 1823, when he accidentally breathed an irritating vapour, which was exhaled from a crucible containing silver in fusion. He immediately became drowsy, with a sense of weight in the head, and was obliged to quit his work. He continued in the same state till the 1st of December, when he had general sickness and nausea. On the 2d, he had frequent and violent efforts of vomiting. The pit of the stomach was painful. General illness much increased. *Respiration not at all laborious. He had neither cough nor pain in the chest.* He entered the hospital on the 3d, and on the 4th he had pain in the epigastrium, which was augmented on pressure. Headache. Abdomen hard; tongue red, and somewhat dry; great thirst; no appetite; frequent evacuations of a green colour. Cough rather frequent. Sputa liquid, yellowish, *not at all viscid; respiration apparently free; no pain in the chest.* Pulse frequent, full, but soft; urine very red. Sensation of weakness and pain in the lower extremities. Sound, on percussion, natural over the whole anterior part of the chest; posteriorly, it was dull over the three superior fourths of the right side. On the left, respiration was almost puerile; on the

right side, it was only heard at the lowest part, and along the spine : over the remaining parts on the same side, nothing was heard during inspiration but a distinct crepitating rale.—Diagnosis: *Pneumonia in the first degree of nearly the whole right lung.*

“ 5th.—General prostration; delirium; respiration more frequent; pulse intermittent. Abdomen hard, painful on pressure; sputa in small quantity, of the same character as before; sound of right side less clear; strong bronchophonia below the right clavicle, and posteriorly on the same side; crepitating rale very slight.—Diagnosis: *The pneumonia has made progress, especially towards the upper part of the lung.*

“ At four o'clock that day, general debility increased; abundant and involuntary dejections; comatose delirium. Bronchial respiration anteriorly on the superior third of the right side, under the axilla, and posteriorly. The crepitating rale has disappeared.—Diagnosis: *Hepatisation of the superior part of the right lung.*

“ 6th.—Stools less abundant during the night. Much delirium till five o'clock in the morning; none at the hour of visit. Intense thirst, which has continued during the night; tongue soft, more humid, and less red. Abdomen still swollen, but more soft, and not painful. Respiration more accelerated, and accompanied by a tracheal rale; little cough; expectoration trifling. No bronchial respiration; over the whole right side, the respiratory murmur is null; on the left, always puerile.

“ At four P.M.—Extreme prostration; tracheal rale very distinct; pulse small and frequent; tongue humid, soft, and slightly foul; intense thirst; epigastrium very painful on pressure. Vomiting has ceased. Constipation. Intellectual faculties entire.

“ 7th.—Augmentation of all the symptoms. Epigastrium continues painful; tongue pale and very humid; pulse hardly sensible. Died at eleven A.M.

“ *Dissection.*—The right lung voluminous and in one mass, was almost covered by the costal pleura, which, adhering intimately to the lung, had been torn out with it, and preserved the impression of the ribs, though the pulmonary tissue presented no such appearance, as was proved by dissection. The two pleuræ, united throughout the whole of their extent, presented a cavity at the superior part of the lung, capable of containing a hen's egg. The parietes of this excavation were formed by the two pleuræ, and it was filled with a liquid brownish pus, which, coming from the lung, had passed into this abscess, in consequence of an erosion of the pleura pulmonalis. A similar purulent collection existed between the superior and middle lobe. The superior third of the lung was compact, and infiltrated with a semi-concrete pus, which in many cases formed abscesses capable of containing a nut, many of which communicated with one another. The middle part presented the red hepatisation, and the inferior a strong sanguineous congestion. These three states were divided by well-marked lines of demarcation, corresponding to the interlobular fissures.

“ The left lung was for the most part healthy, except at its posterior part, where it was inflamed to the first degree; the inferior lobe was

beginning to pass into red hepatisation. The heart was natural; its right ventricle containing a very adherent fibrinous concretion.

"The abdominal viscera presented their natural aspect. The stomach was remarkably flaccid; its mucous membrane in some parts slightly injected, and towards the pylorus of a light red colour. The whole of the intestinal tube being opened, the end of the jejunum only was found with a vascular injection. The other viscera were healthy. Pancreas a little harder than natural." (P. 50—55.)

This case was one of considerable obscurity, and the author has placed in italics, passages in which we have retained the same character: they are obviously intended to mark certain symptoms, as leading to the belief that the disease was not thoracic. We have to observe, however, that the first and most striking part of the account relates to the state of the patient before he applied at the hospital; and, as it is not stated that he had been seen by the reporter, we think it fair to infer that he had not; consequently the same confidence cannot be placed in the accuracy of the narration. Be this as it may; he entered the hospital on the 3d,—in what state we are not informed; but next day, when the first authentic report is given, he had "rather frequent cough," with "liquid, yellowish" sputa, and a "frequent, full, but soft" pulse, while his urine was "very red;" and, when we consider that these symptoms had been brought on by breathing "an irritating vapour," we do not think it required any extraordinary sagacity to conjecture that the lungs might be inflamed. We are not, however, disposed to deny that there was a good deal of ambiguity about the case. Let us observe, however, the result afforded by the stethoscope under these circumstances. The disease was pronounced to be "pneumonia in the first degree of nearly the whole right lung;" then we are told that "the pneumonia has made progress, especially towards the upper part of the lung;" and, lastly, that "hepatisation of the superior part of the right lung" had occurred. So says the mediate auscultation. But, when we turn to the dissection, we find that, instead of the upper part of the lung being simply hepatised, "the two pleuræ, united throughout the whole extent, *presented a cavity at the superior part of the lung capable of containing a hen's egg.*" This excavation, we are told, was filled with pus, which had come from the lung through an erosion in the pleura pulmonalis. Here, then, was a large abscess between the two pleuræ, communicating with the lung by ulceration,—*the presence of which was not detected by the stethoscope.* "A similar purulent collection existed between the superior and middle lobe." Here, then, is a *second large abscess not detected by the stethoscope.* Again, "the superior third of the lung was compact, and infiltrated with a semiconcrete pus, which in many places formed abscesses capable of containing a

nut, many of which communicated with one another." *Here, then, is a whole set of abscesses, which were not detected by the stethoscope.* We really must confess ourselves at a loss, therefore, to discover in what respect this case, any more than the preceding, is "admirably illustrative" of the use of this instrument.

Sonorous rale.—The comparisons used to convey an idea of this sound are somewhat incongruous: it is likened to the "snoring of a person asleep," the tone "of the bass-string of a violin," and to "the cooing of turtle." It is supposed to arise from narrowing of the bronchial tubes, caused by determination of blood to the mucous membrane, or from some other change in the form of these canals. We are told that—

"We must be careful not to confound this rale with the guttural sound produced during sleep: the first has its seat in the chest, and is not heard by the naked ear; the second, on the contrary, is solely derived from the manner in which the air inspired and expired strikes the velum of the palate. By means of the stethoscope, it is easy to perceive that it does not take place in the cavity of the chest.

"The sonorous rale is the pathognomonic sign of acute bronchitis.

"In pneumonia, accompanied by bronchitis, we have the sonorous and crepitating rales complicated. In the dry pulmonary catarrh, or asthma, the sonorous and hissing rales are met combined. The first varies little; the second is of great mobility, disappearing for a greater or less time, in consequence of coughing, or without any perceptible cause; and then returning suddenly, and with a different intensity. Sometimes both are constant, distinct, and accompanying the greatest part of the organ. The catarrh is then extensive and violent.

"In the humid variety, the same phenomena may exist, but ordinarily they are complicated with a third, namely the mucous rale, which becomes entirely predominant after the acute stage is past, and thus characterises the disease." (P. 68, 69.)

Hissing rale.—This is a prolonged wheezing sound, accompanying either the end or commencement of inspiration or expiration: it is compared to the "cry of young birds," the sound of "two pieces of oiled marble suddenly separated," or that of a "small valve" in action.

"The hissing rale is owing to the presence of a scanty but viscid mucus, obstructing more or less completely the small bronchial ramifications, through which the air is obliged to pass before it reaches the vesicles. When it is heard over a considerable portion of the lung, respiration is very laborious. It is during the existence of this rale, that we observe the sputa presenting an arborescent appearance, resembling the form, calibre, and ramifications of the minute bronchial tubes, from which they have been expelled by the efforts of coughing.

"The principal affections in which the hissing rale is heard, are emphysema of the lungs and the chronic pituitous catarrh of M. Laennec.

In the acute species of catarrh, it occurs complicated with the sonorous and mucous rales.

"In emphysema, the respiration is not heard over the affected part, while the chest sounds well, or even louder than natural, on percussion. A slight hissing rale is heard from time to time, at the points corresponding to the affected part." (P. 78, 79.)

Having thus dismissed the rales, we next come to the *phenomena of the voice*, which are either natural or pathological. The former consist of a certain resounding of the voice, which produces over the whole of the chest a trembling or vibration, capable of being produced by the application of the hand. When the stethoscope is used, a confused reverberation of the voice is heard, varying in intensity according to the point examined. It is most distinct in the axilla, and between the vertebral column and the edge of the scapula, and about the angle formed by the clavicle and sternum. In other regions of the thorax, particularly the lower and back parts, it appears weaker, giving a confused inarticulate sound. In deep-toned voices, the resounding is stronger, but more confused; in shriller voices, as those of women and children, it is much more distinct. It is, of course, necessary to study the natural phenomena in the first instance; and, being familiar with them, we have the better chance of catching (if we may so call it) the deviations from those which indicate disease. These are referred to four varieties—Bronchophonia, Pectoriloquism, the Metallic Tinkling, and Egophonia.

Bronchophonia is the name given to a vibratory sound of the voice, when it is louder than natural, or occurs at a part of the chest wherein it is not heard during health. It does not form an articulate sound, but is confused, and seems barely "to enter the bottom of the stethoscope, without traversing the tube to arrive at the ear of the observer." This modification of sound is supposed to depend upon induration of the lungs, produced by inflammation, or by a tubercular mass; a medium being thus formed which is better fitted for transmitting the murmur of the voice. The best method of obtaining an accurate idea of this phenomena is stated to be by applying the instrument to the point of the chest corresponding to the root of the lung, while the patient is speaking. When dependent upon extensive ulceration of the pulmonary tissue, it is always accompanied by bronchial or tracheal respiration. This symptom is chiefly of use by enabling the pathological inquirer to institute a comparison between the two sides of the chest, and as an additional proof when coexistent with other phenomena.

The next modification of sound being one regarded as very important, we shall give the author's account of it without abridgment.

"*Of Pectoriloquism.*—We say that a patient has pectoriloquism, when the voice, distinctly articulate, seems to issue directly from the place where the stethoscope is applied, and to traverse the canal of that instrument.

"Pectoriloquism is either perfect, imperfect, or doubtful. It is *perfect*, when the articulate and well-defined voice traverses the cylinder, and arrives at the ear with its natural or an increased intensity of sound. It is *imperfect*, when the articulate voice reverberates strongly under the stethoscope, appearing to approach the ear, without, however, traversing the entire tube. It is *doubtful*, when the voice appears sharp and restrained, like that of ventriloquists; not traversing the tube, and approaching to mere bronchophonia. Imperfect and doubtful pectoriloquism can only be trusted to as indicative of organic lesion, when they exist on one side only, or when they coexist with other symptoms observed by examining the respiration.

"The most perfect pectoriloquism may sometimes take on the characters of the imperfect, or even doubtful species, for a short time. It may disappear from time to time, becoming thus intermittent. This change shall be explained, after the exposition of the causes of pectoriloquism.

"This phenomena is owing to the presence of excavations in the lung, however produced, communicating freely with the bronchial tubes, and either in part or completely empty. Pectoriloquism may be met with in all parts of the chest; but it is most frequently observed in the axilla, the space between the clavicle and the trapezius, that immediately under the clavicle; and the infra and superior spinous fossæ. These all correspond to the superior part of the lung; and it is here that the excavations produced by the softening of tubercles are most frequently observed. Pectoriloquism varies with the sound of the voice, the size of the excavations, their form, and the density of their parietes, the adhesion of the two pleuræ over these cavities, and the facility or difficulty with which the air enters them.

"The more acute the voice, the more evident is pectoriloquism; in persons with a deep voice, it is almost always imperfect, and sometimes doubtful. Aphonia does not cause it to disappear completely, and it often happens that we can distinguish better what the patient says by means of the stethoscope applied over the excavation, than with the naked ear at the same distance.

"In order that pectoriloquism may be perfect, it is necessary that the excavation be only of a moderate size. In very large excavations, pectoriloquism is changed into a deep sound, analogous to that of the voice transmitted to some distance through a trumpet or cone of paper. Where, on the contrary, the cavities are very small, it is frequently doubtful, especially if the excavation is situated in the centre of the lung, and surrounded by parts still easily permeable to the air.

"The irregularity, or the direct communication of a number of cavities with one another, causes pectoriloquism to appear somewhat stifled and confused; the voice appears badly articulated. The firmer and thinner the parietes of the excavations, the more perfect is pectoriloquism. When, by a process of cicatrization, a fibro-cartilaginous

membrane is formed over the entire surface of one of these cavities, the pectoriloquism acquires a metallic tone, sometimes so considerable as to hinder our accurate perception of the sounds.

"An excavation situated at the surface of the lung, and whose thin parietes do not adhere to the costal pleura, but collapse during expiration, does not cause pectoriloquism. On the contrary, a superficial excavation, with thin adherent walls, gives so strong a pectoriloquism as to fatigue the ear.

"This phenomenon is more evident in proportion as the cavity contains less fluid, because the bronchial communication is then generally free, permitting an easy access to the air. This communication, however, may be destroyed, more or less completely, by the accumulation of the sputa in the bronchial tubes: this renders perfect pectoriloquism doubtful, and gives it that intermittent character which is not unfrequently observed. It may be often remarked, when pectoriloquism is absent in a patient in whom we have observed it but the evening before, that the expectoration has been scanty, or almost entirely wanting.

"True pectoriloquism is heard in the affection termed by M. Lænnec *dilatation of the bronchial tubes*. Of this he has given a case, art. 149 of his great work, (*De l'Auscultation Médiante*.)

"A woman labouring for some years under habitual yellow expectoration, was evidently pectoriloquous on the right side above the third rib. Upon dissection, two bronchial tubes, dilated to three times their natural size, were found in the corresponding part of the lung; one of them terminated in a sort of cul-de-sac, large enough to contain a small nut.

"M. Andral has given a very instructive case of dilatation of the bronchial tubes, giving rise to pectoriloquism.

"A middle-aged man entered the hospital of La Charité, labouring under the symptoms of pulmonary consumption. The respiratory murmur was scarcely heard on the left side of the chest, while anteriorly, on a level with the heart, and posteriorly, below the inferior angle of the scapula, evident pectoriloquism was observed. He sunk, after remaining nearly two months in the hospital. The following is the account of the dissection, in the words of M. Andral.

"The left lung generally crepitated but little; it, however, floated when plunged in water. In the superior lobe there existed a cavity large enough to contain a middle-sized nut, and filled with a fluid analogous to the matter of expectoration. A bronchial tube, as large as a writing pen, opened into it. Dissection soon convinced us that its parietes were continuous with those of the cavity itself, forming the same tissue. We found in both the mucous membrane red and thickened, and the fibrous membrane, with some traces of the cartilaginous rings. It was now very evident that what we had taken at first for a tuberculous excavation, was nothing but a considerable dilatation of a bronchial tube. In many points of the parietes of the dilated portion, small orifices opened, which led into other bronchial tubes." (P. 88—93.)

Metallic tinkling.—This sound resembles the falling of a drop of water into a deep vessel, of a grain of sand into a glass cup, or the sound emitted by a vessel of metal or porcelain when

struck with a pin; it is of short duration, and is heard on raising the patient, or causing him to cough; it may be occasionally perceived when he merely breathes or speaks, but not nearly so well as when he coughs. When it is present along with pectoriloquism, the two sounds are heard traversing the tube of the stethoscope together. Where, however, the pectoriloquism is not coexistent, the metallic tinkling is heard within the chest, and compared to the sound of a wire struck with the finger.

“As this peculiar sound depends upon the vibration of the air caused by respiration, the voice, or coughing, on the surface of a liquid partly filling an unnatural cavity in the chest, it can only exist in two cases: first, where a serous or purulent effusion coexists with pneumothorax, arising from a fistulous opening into the cavity of the pleura; and, secondly, where a large excavation, half filled with fluid pus, occurs in the substance of the lung.

“In order that it shall happen in the first case, it is necessary that a fistulous opening be found between the cavity of the pleura and some of the bronchial tubes: thus it becomes a sign of this triple lesion. The distinctness of the sound is in proportion to the diameter of the fistulous opening, and the extent of the vibrations teaches us the space occupied by air. It is in general stronger as the quantity of air existing in the chest is greater; and hence we may conclude, when it is indistinct, that the liquid effusion is considerable, and vice versa.

“When it arises from the vibrations of the voice, or from coughing, acting on the surface of puriform matter in a large excavation of the lung, it presents some important differences. Its indistinctness, and the small extent of its vibrations, teach us that it occurs in a very circumscribed space; it appears to enter the cylinder, and is combined with pectoriloquism, which, with the other symptoms, enables us easily to distinguish this from the former case.” (P. 104—106.)

Egophonia consist in a strong reverberation of the voice, which appears shrill, interrupted, and “quivering like that of a goat.” It most commonly occurs between the spinal column and the internal edge of the scapula, but it may likewise exist over the whole extent of the chest. *Egophonia* is thus heard over a much more extended space than pectoriloquism; and it is stated always to indicate the presence of a small quantity of liquid in the cavity of the pleura, or of false membranes in a soft state. This last assertion rests on the authority of M. COLLIN. When, however, the effusion is either much increased or diminished in quantity, this symptom disappears. The points where *egophonia* is most commonly heard, are those which correspond to the upper portion of the effused fluid. If the patient lies on his belly, it is either not heard at all, or at best but very feebly in the space between the spine and scapulæ; while it is still perceived in the side. If the patient lies on the side opposite the seat of disease, this sound is rendered less apparent: it is heard

to most advantage when he lies on his back or sits up. Even those best skilled in the use of the stethoscope appear liable to be deceived by this sound. "It has frequently happened (says M. Andral,) that, after having believed that egophonia, and other signs indicative of effusion, existed, we have discovered our error from the examination of the opposite side."* Of course we ought, therefore, always to examine both sides before we draw any conclusion. It further appears that the egophonia frequently occurs only at intervals, or in the pronunciation of certain words: thus M. Andral has known a patient in whom this sound was only present when he articulated the word "*oui*." —Credat Judæus!

[To be continued.]

DIVISION II.

FOREIGN.

ART. II.—*Nuovo Metodo di Curare la Trichiasis*. Memoria del Professore A. VACCA BERLINGHIERI. (From the *Annali Universali di Medicina*.)

New Method of curing the Trichiasis. A Memoir by Professor A. VACCA BERLINGHIERI.

THIS Memoir, first published in the "*Nuova Giornale di Letterati*," a work not exclusively devoted to medical or surgical subjects, has since been reprinted in various other periodical publications; and, considering the conflicting opinions that have been propagated and maintained relative to the operation of which it treats, and the celebrity of the author, we conceive that we cannot perform a more acceptable service to our readers than that of presenting them with the details. This Memoir, in its original state, occupies a very considerable space; for M. VACCA not only gives a description of the different species of trichiasis, as described in systematic writers, but explains at some length, and comments upon, the means hitherto put in practice for the purpose of remedying them. We shall not follow this plan exactly, but shall limit ourselves (after saying a few words relative to the disease,) to a description of the means of cure, as recommended by the illustrious author.

After a page or two of preliminary remarks, M. Vacca says—

It is well known that oculists, in general, admit of three different species of trichiasis: in the first the hairs are turned inwards, and with them the tarsus, in a manner more or less marked, either in one point only or throughout the whole extent of its free margin. In the second species, the tarsus preserves its proper direction perfectly, and the hairs

* *Clinique Médicale*, tome ii.

are turned against the eye. In the third, both the cartilage and the hairs preserve their natural direction, but there is a preternatural row of hairs, which are either altogether or in part turned inwards against the ball of the eye. The two first species are generally admitted, but the third is controverted; names of equal respectability maintain the opposite sides of the question.

M. Vacca, after giving an epitome of the opinions of the principal oculists as to the causes of these different species of deformity, proceeds to enumerate the methods which have been adopted for remedying it, commencing with the plan recommended by SCHREGER in Germany, and terminating with GUTHRIE's modification of CRAMPTON's operation. Upon each of these plans he afterwards comments with the acumen of a practised and experienced master, and finally concludes by rejecting them all, as either partially or wholly inefficacious, or as substituting a deformity as intolerable as the original disease. Towards the termination of the above criticism, our author uses the following language.

From this exposition it results that surgery possesses means of cure in that species of trichiasis in which the tarsal cartilage is slightly inverted together with the hairs, and that not only without producing much pain, without leaving behind it any deformity, nor producing any imperfection in the organ of vision; secondly, that art can produce much amelioration in that species which is formed by complete and total inversion of the cartilage throughout its whole extent, by means of an operation, not only extremely painful, but which leaves a constant deformity, and deprives the eyelids ever after of its lashes; thirdly, that there is no method known of curing that kind of trichiasis in which some single hairs, or some groups of hair, either naturally existing or of new formation, are directed against the globe of the eye, in which the tarsus remains in its situation, or is but slightly inverted, since all the methods hitherto put in practice either fail in overcoming the disease, or convert it into another of no less consequence. Nevertheless, (continues M. Vacca,) the mode of remedying this deformity is not attended with any great difficulty; and, if this desirable end has not hitherto been attained, it is because the ancient surgeons, from the want of accurate anatomical knowledge, have not pursued the proper course, and the moderns have been contented to follow their track. The bulbs of the hairs of the eyelids are situated, as every one knows, by the side of each other, disposed in a line upon the external face of the free margin of the eyelid, involved in cellular substance, and covered solely by a thin integument.

To cut this integument,—to uncover the bulbs of the inverted hairs,—to extirpate or to destroy them, is the method of cure proposed by the author. This method, considered theoretically, appears infallible in its results; and such was the impression it made upon M. Vacca's imagination when he first conceived the project, but he did not choose to publish it until

it had been verified by actual observation. "I might be permitted (says our author,) to dispense with an account of this operation, it being easy for every surgeon to conceive the mode of performing it: nevertheless, I will describe it, (he adds,) in order to spare some the trouble of meditating upon it, and to offer to others the means of proposing useful modifications.

To perform this operation more readily, it is necessary to be provided with an instrument which M. Vacca calls a spoon, a small knife, a very fine pair of dissecting forceps, and a small pair of scissors. The two first instruments not being well known, we have annexed a sketch of them, in order to save a tedious and imperfect description.

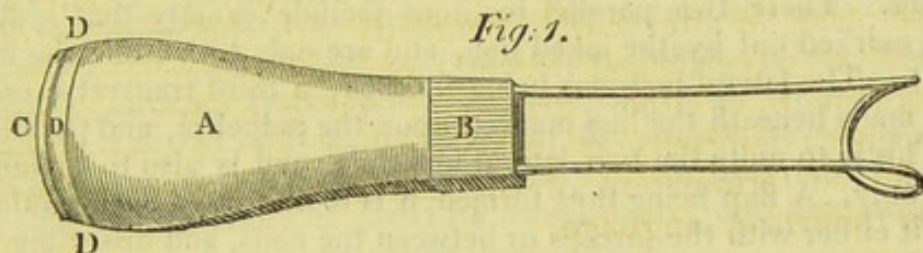


Fig. 2.



Fig. 1, represents the spoon of its proper dimensions. A. This part of the instrument, made of tortoise-shell, of horn, or ivory, has two faces, one slightly convex, the other slightly concave. B, C. The two extremities. C contains a little groove, D, D, D. The extremity B is firmly fixed into a suspension of the eyelid, made of silver wire, and which may serve also as a handle.

Fig. 2, represents the knife. The edge A is very sharp; the side B is blunt.

The patient being properly placed in a chair, the face turned towards the light, an assistant places himself behind the patient, his breast presenting a firm rest for the head of the person operated on, as in the operation for cataract. The operator, placed immediately in front of his patient, either standing or sitting, as may be most convenient to him, raises up the eyelid, and ascertains the number of hairs that are inverted, and the extent which they occupy. Having done this, he traces with a pen and ink a line upon the integument covering the eyelid, parallel to its free margin, and a quarter of a line distant from it; and this line is to be extended in length, so as to show with precision, upon the surface of the lid, the space which the misdirected lashes occupy on the internal surface. He then introduces the spoon between the palpebræ and the globe of the eye, in such a manner that the free margin of the former is placed in the groove which is situated on the

convex surface of the instrument. He then draws this from the globe of the eye as much as possible, to prevent it from being irritated, and to extend the palpebra more thoroughly. Having done this, he confides the spoon to an assistant, who with his right hand, if the eye operated upon is the right eye, (if not, with his left,) draws, distends, and fixes the palpebra upon the spoon, by means of the index and middle finger placed upon the angles of the eyelid, so as to leave the part to be operated upon exposed and free. With the other hand passed under the patient's chin, he will hold the handle of the spoon, taking care to maintain it in the position in which it was delivered to him by the operator. Things being so disposed, the surgeon makes, with the knife above delineated, two small vertical incisions, which are to commence a line and a half above the free margin, and are to terminate precisely at that point. These two parallel incisions include exactly that space which is marked out by the inked line, and are only to include the integument. The lateral incisions being finished, a third transverse one is to be made beneath the line marked upon the palpebra, and parallel to it. This is to unite the two lateral incisions, and is also to include the skin only. A flap being thus formed, it is to be turned back, taking hold of it either with the forceps or between the nails, and dissecting it with the knife from the parts beneath. The flap being turned back, the bulbs present themselves; but it is not always easy to perceive them clearly, and to remove them, because not only does the blood contribute to conceal them, but the fixed cellular membrane that surrounds them does not render it very easy to lay hold of them. On this account the surgeon must clean the wound thoroughly from the blood, and be provided with a very fine and excellent pair of pincers, and with these, and the knife, or with a small pair of forceps, take away all that are found between the inverted skin and the external face of the free margin of the eyelid. That being done, the operation is finished; and the surgeon reapplying the flap of integument to its natural position, keeps it easily in its situation by means of adhesive plaster, without the necessity of any other dressing.

It is necessary to observe, that, if the inverted lashes are at a distance from one another, and in the interval between them there are many of the hairs having a natural and proper direction, it will be advisable only to destroy the bulbs of the former, without disturbing those of the latter. It is not necessary to discuss the modifications which this operation requires when performed upon the lower eyelid: the experienced surgeon can readily adopt his means to the different circumstances of the two cases.

Although M. Vacca succeeded perfectly in the two first cases in which he adopted this method of operating, nevertheless he felt that the extirpation of the bulbs might easily confuse a person not accustomed to delicate operations, and therefore he was anxious to render it more easy of execution, and consequently more manageable to every surgeon; for this purpose, in the third case, besides the ordinary apparatus, he prepared a kind of wooden probe, with a small quantity of cotton thread at the

extremity. The operation was commenced in the ordinary manner; but, as soon as the flap was raised up, instead of trying to lay hold of the bulbs with the pincers and to extirpate them, he touched them with the armed end of the probe dipped in nitrous acid. It is scarcely necessary to observe, that the cotton must not be so much impregnated with the acid as to let it run upon the neighbouring parts. This plan, which undoubtedly renders the operation both easier as well as quicker, although not less painful, appears to have an equally successful result.

With respect to the lashes themselves, the bulbs of which have been destroyed or extirpated, two methods may be followed,—either to take them away, or to let them fall off spontaneously. This latter circumstance takes place sometimes sooner, at other times later, but not before the sixth day. Neither is it always advisable to suffer the lashes to fall off, since, on account of the extreme sensibility of the parts, their presence occasionally produces great inconvenience, and therefore it becomes necessary to extirpate them directly.

The method described, observes our author, appears to unite all the advantages hitherto sought for in vain. By means of it the bulbs are absolutely destroyed, and consequently the lashes; it does not change the direction of the free margin of the palpebra, nor does it interrupt its continuity; therefore, the weeping of the eye, the ingress of air and light during repose, and the introduction of foreign bodies, are all prevented. It does not produce deformity; and the inutility of all apparatus and dressing after the operation, excepting some strips of sticking plaster, may be reckoned as something in favour of this operation.

Our author illustrates the above details by the relation of three cases, which we shall present to our readers; passing by a page or two of observations on the usual means of procuring union of the parts, after the common operation for the cure of the disease. These remarks would lengthen our review too much, and have no immediate reference to the principal subject of this Essay; and therefore we proceed at once to the detail of the three cases, in which this new mode of operating was put in practice.

“CASE I.—Rosa Marracini, of Pontedera, twenty-one years of age, had been afflicted for a long time with chronic ophthalmia, produced by that species of trichiasis which is accompanied by an inversion of the eyelid, and from which inconvenience she had been relieved by the destruction of that part of the integument covering it. Not long after her cure, the trichiasis reappeared; but the tarsus had not again abandoned its natural direction, although a few of the hairs had left their usual situation, and directed themselves against the globe of the eye. M.

Vacca, perceiving the inconvenience of repeating the former operation in this case, operated upon the patient in the hospital according to the new method. The operation proved very painful. No other dressing was placed upon the eye but a bandage and a light compress, to exclude the air. The pain, which was rather severe for several hours, was mitigated by a dose of laudanum. Notwithstanding this, the eyelid swelled, inflammation was excited, and suppuration was established in the wound on the fourth day. On the sixth day, the hairs that were directed inwards fell off spontaneously; the chronic ophthalmia gave way in a short time, and the wound was cicatrised by the twelfth day; and a month afterwards the patient left the hospital perfectly cured.—This case is related by a surgeon, named GAMBERRI.

CASE II.—Maria Gallizea, of St. Sisto al Pino, of a feeble constitution, twenty-one years of age, and a cook by profession, was affected, in consequence of chronic ophthalmia, with trichiasis, complicated with inversion of the tarsal cartilages of the upper eyelids. Subjected in the hospital to the common operation for this complaint, she was entirely cured; but the cure was not permanent: a fresh attack of ophthalmia supervened, and a surgeon, observing that some of the hairs of the eyelids rubbed against the eye, extirpated them. This extirpation produced, as usual, temporary relief; but the patient at length, weary of repeated relapses, presented herself again at the hospital in the month of March, 1825, to consult M. Vacca. On examining the state of the eyelids, he found that the cartilage of the right eye maintained its proper direction, but that one solitary hair, which appeared to be fixed in the interior face of the free margin of the lid, was the only cause of the irritation of the globe of the eye. On the left side, a slight and partial inversion of the cartilage was found. To correct this the common operation only was necessary; but, to overcome the defect which existed on the right side, the Professor, employing the means above detailed, laid bare the bulb of the inverted hair, and destroyed it. The blood which flowed from this little incision rendered the destruction of the bulb rather troublesome. The wound being dressed, the patient soon became easy; no inflammation ensued, and union by the first intention took place. At this period the hair had not fallen off, and it was left in its situation, in order to see what would occur. On the sixth day it fell off, and the chronic ophthalmia, which it had kept up, disappeared. The girl was kept in the hospital until the 10th of May, and at that time she quitted it, perfectly cured. On the 10th of June she went, at the request of the surgeons, to the hospital, in order that the eye might be examined; and it was found, not only that the hair had not reappeared, but that a certain depression, or little pit, existed in the spot where the bulb had been; and that no hair, excepting the inverted one, had fallen from the lid.—This case is signed by D. GARGANI.

CASE III.—Leopold Sforzi, of Pisa, thirty-five years of age, of a good constitution, was attacked, in the year 1814, with a violently acute ophthalmia, which terminated in an abscess in the globe of the right eye, and in chronic ophthalmia of the left, which at length produced the inversion of the cartilage of the upper eyelid, and consequently of the lashes implanted in it. In 1823, this man presented himself at the

hospital. The common operation for trichiasis was performed, and for a time the cure appeared to be complete. Some months afterwards, however, the chronic ophthalmia reappeared, and the man returned to consult Professor Vacca, who found that the cartilage maintained its proper direction, but that three hairs, rather longer and larger than ordinary, having abandoned their natural position, rubbed against the eye. The patient would not at that time submit to an operation, but preferred the extirpation of the hairs, which was repeated from time to time; and he did not come back to the hospital till the 24th of April, 1825, the eye then being in a high state of inflammation, attended with an obvious opacity of the cornea. M. Vacca now persuaded the patient to submit to his new operation, and, having laid bare the bulbs, he destroyed them by means of the nitric acid. This rendered the operation both extremely short and easy, but it was not less painful. The pain, however, soon yielded, and a very trifling degree of inflammation and suppuration succeeded. On the fifth day, the hairs not having fallen off, and continuing to produce great inconvenience to the patient, the Professor extirpated them with the forceps: the irritation of the eye then disappeared. On the sixth day, the little wound resulting from the operation was healed, and the hairs, which, after common extirpation, were usually renewed at the end of eight or ten days, had not shown themselves at the end of two months; but a small depression was, as usual, observed in the situation of the bulbs that had been destroyed. The complete deprivation of the hairs from that portion of the palpebral margin which suffered from the action of the caustic, must also be noted. For forty days all the lashes remained in their proper situation, and every one was surprised that the operator had been so fortunate as only to destroy the bulbs of the inverted hairs; but, at that epoch, they began to fall off one after the other, and the surprise ceased.

ART. III.—*Recherches Anatomico-Pathologiques sur la Phthisie*. Par P. C. A. LOUIS, Docteur en Médecine des Facultés de Paris et de St. Petersburg; Membre adjoint de l'Académie Royale de Médecine de Paris, Correspondant de celle de Marseille. *Précédées du Rapport fait à l'Académie Royale de Médecine*, par MM. BOURDOIS, ROYUR, COLLARD, and CHOMEL.—Pp. xxiv. 560. Paris: chez Gabon et Ce. 1825.

Anatomical and Pathological Researches concerning Phthisis. By P. CH. A. LOUIS, Doctor of Medicine of the Faculties of Paris and St. Petersburg, &c.

[Concluded from page 259.]

HAVING, in a previous article, given a tolerably extended account of the pathological anatomy of *Phthisis*, we now enter on an examination of the second part of M. Louis's work, containing a detail of the symptoms of that disease, together with its principal complications and causes, terminating with a few reflections on the method of treatment.

Without further preface, we proceed to the first chapter,

which commences with what our author calls a general description of the complaint. Following the example of M. Laennec, our author divides the course of phthisis into two periods; the one anterior, the other posterior, to the softening and evacuation of the tubercular matter through the bronchiæ.

First epoch.—In the greater part of the cases, the disease began without any known cause. A third of the patients attributed its invasion to alternations of heat and cold, to which they were exposed in the exercise of their different occupations, or other similar causes; but of these, many did not speak of this in a very positive manner. A very small proportion of patients fixed the origin of the catarrh, with something like precision, to twenty-four, thirty-six, or forty-eight hours, from the application of the cause to which they ascribed it. The commencement of the disease was generally by a trifling cough, to which no attention was paid, being generally attributed to the effects of a common cold. The expectoration was usually clear, and resembling broken-down saliva: in a tenth of the subjects, however, the cough was dry for a period of one or more months. Sometimes it took place by fits, and made rapid progress. After the lapse of a greater or less period of time, the sputa were more opaque and greenish; in the second period, they entirely changed their aspect. Sometimes hæmoptysis preceded the attack, but more generally it was a consecutive symptom. The respiration was not sensibly affected at first, and dyspnœa did not become troublesome, in a certain number of subjects, at a more advanced period of the malady. In a considerable proportion of cases, severe pains between the shoulders, and at the sides of the chest, appeared after the commencement of the disease. If auscultation was practised at this period of the complaint, the respiratory sound did not appear to be altered; at least, with few exceptions: in these, respiration appeared feeble under one or both clavicles, or else there was in the same points, and in a limited space, a little sonorous and mucous rattle, and the chest rendered a sound somewhat less clear than the opposite side. Besides these local symptoms, others of a more general nature prevailed: sometimes alternate chills and heats, or nocturnal perspirations, took place from the very beginning. With few exceptions, the appetite was undiminished for some time; afterwards it fell off gradually. Sickness after eating occasionally took place, if the cough was violent; purging very seldom. Emaciation appeared soon after the beginning of the disease, and increased slowly.

Second epoch.—At this time the cough was usually more troublesome and frequent; the expectorated matter was greenish, striated with yellow lines, opaque; it was of a round form,

contained no acid, and was (as it were) lacerated. Sometimes, under the influence of medicine, it lost this character for a short time; and it was sometimes accompanied by an expectoration similar to that met with in the first period. Pain was increased at this time, and spitting of blood frequent, though seldom to any great extent. Pleuritic symptoms, of great intensity, occasionally supervened. The patients generally stooped the head. Their mode of lying in bed was various, but generally on the side opposite to the large excavations. Auscultation did not appear, from our author's description, to possess any great advantage over simple percussion in these cases, as, in one-third of the subjects, this latter produced no sound for a considerable extent below one or both clavicles.

With regard to the hectic fever and diarrhœa, M. Louis observes nothing that our readers are not familiar with.

With respect to the duration of the disease, the following are the results of our author's researches:—Out of 114 cases of phthisis, the duration of which had been observed with the greatest possible exactness, rather more than two-tenths died from the first to the sixth month; four-tenths from the sixth to the twelfth; a little less than a fourth from one to two years; and rather less than a fifth from the second to the twentieth year.

With regard to the influence of sex, it appeared that, when death ensued within a year, the proportion of females to males was as thirty to forty-two.

The mortality from phthisis, compared with all other maladies, was as one to two: that is to say, of 358 subjects who died in M. Chomel's wards in the space of three years and a half, 123 perished from phthisis; and if to this number may be added those who, though affected with tubercles, died of other complaints, it brings the proportion of those who died with consumptive symptoms to fully one-half of the whole mortality.

We may now proceed to enumerate the particular symptoms of the disease; but, in so doing, we shall only notice those circumstances which appear to us to present either some features of novelty, or which are not universally known or acknowledged.

Cough.—M. Louis observes, that some patients were only affected with this symptom in the last days of their existence, although tuberculous excavations had existed in the lungs for some time. Others (a very small number, however,) coughed but little, or after a certain time, lost the cough entirely, and which only returned a few days previous to their death. In general, the cough was aggravated at night. The force and frequency of this symptom were generally in proportion to the rapidity of the progress of the disease.

Expectoration.—The passage from the first to the second stage of phthisis, is marked by a remarkable change in the appearance of the expectoration: from being white, mucous, and full of air, it became opaque, greenish, deprived of air, and striped with yellow lines, which gave them a feathered appearance. Sometimes a white matter, like baked rice, was observed in the matter expectorated; but this was not a frequent occurrence. After the lapse of a greater or less period of time, these portions of white matter, as well as the striated appearance of the expectoration, ceased. It then became homogeneous, of a round form, and (as it were) torn or ragged in its circumference. It was heavy, but nevertheless did not always fall to the bottom of water, and sometimes floated on the surface of a clear fluid expectorated at the same time. Instead of a colour inclining to green, it became greyish, and of a dirty aspect. This happened generally from ten to twenty days before death; and then the matter lost its consistence and form, and was occasionally mixed with blood, and surrounded with a circle of a rose-colour. It is to be remarked, that it is only from the *union* of all these appearances that a diagnostic can be formed, since in chronic catarrh, or even in acute pulmonary catarrh, some of them may be met with: for example, the expectoration in these cases may be green, homogeneous, or opaque, but it will not be striated, nor mixed with white portions, nor round, as in phthisical subjects.

Our author makes some further observations on this subject, but they are for the most part minute, and we have not space to enter into the consideration of them.

Hæmoptysis, either slight or severe, existed in two-thirds of the cases, and it sometimes preceded the cough and expectoration for a greater or less space of time; and our author demands whether it is to be considered as the *avant courier* of tubercles, or a symptom denoting their presence? and he concludes by inclining to the belief that it may be looked upon in that light in general. Hæmoptysis was met with in the females, compared to the male, in the proportion of three to two. With regard to the age, this had no influence in the case of the male patients; but, in the female, one-third of those from nineteen to forty years had no spitting of blood, whilst of those from forty to sixty-nine only one-seventh part of the patients had escaped it. Neither had the age or constitution any apparent influence on the force of the hæmoptoe. In some cases, this symptom took place only once in the course of the disease, and it was very seldom repeated three or four times. In some rare cases, it appeared to have been caused by a severe accession of cough; but, generally speaking, it came on without any appreciable cause, was rarely accompanied by heat, or fever, or pain in the chest.

Dyspnæa.—Concerning this symptom, M. Louis offers no remarks which need detain us, and therefore we proceed to the next symptom, *Fever*.

This our author remarked always to commence from the very outset of the disease, whether acute or latent; and it appeared that its principal, if not its only cause, was the diseased condition of the lungs. Although cold chills were the most ordinary accompanying signs of fever, they were not constantly met with, and were wanting in a sixth of the subjects: these merely complained of great susceptibility to cold, and continued to be exempt from shiverings even during their residence in the hospital. In the majority of cases, these chills recurred solely in the evening, though now and then they took place at uncertain times during the day; but in no case were the two distinct shiverings, described by authors as taking place at fixed periods in the day, to be met with. These shiverings were generally followed by heat and sweat, but sometimes sweating was not observed; at others, sweating took place without any previous chills. M. Louis combats at some length the opinion of some authors, that the sweats and the diarrhœa have any correspondence with each other; but we neither perceive the utility of the discussion, and moreover we think that the fact is indisputable, however authors may contest the explanation.

Concerning the degree of *thirst* and the state of the *appetite*, there is nothing particular to remark.

The *diarrhœa* of the last days of life.—In this division our author places that which occurs from the twentieth to the fifth day preceding the death of the patient. This symptom took place in the fourth-part of the cases; in a few, it was preceded by chills and heat, or colics; but, in the majority, none of these symptoms were observable. There was always an exact correspondence between the symptoms and the lesions to which they could be attributed; for, if the diarrhœa only existed a few days before death, the ulcerations and the softening of the mucous membrane of the colon did not appear of a more ancient date. The diarrhœa was less considerable in those subjects where there was ulceration without softening of the mucous membrane, than in the cases where that existed.

The *long-continued diarrhœa* presented itself under two principal forms, either continued or remittent: the duration of this latter varied from fifteen months to forty-eight days. The remissions were of a greater or less length,—eight, ten, fifteen, or twenty days; the stools generally not numerous, and without any colicky pains. Ten cases of this description presented ulcerations in the small intestines; six, in the colon; and, with only one exception, in each instance they were small in size. The mucous membrane of the colon was very much softened in ten

subjects, red and thickened in three of the cases; so that this kind of diarrhœa presented the same lesions as the preceding one. The long and continued diarrhœa lasted from one to twelve months, and sometimes more. In forty-one cases of this kind, thirty-five had ulcerations of the small intestines, and thirty-one in the large. In twelve instances, these ulcers extended throughout the whole of the small intestines. Nineteen cases of the same large ulcerations of the large intestine were found, and thirty of softening of its mucous membrane; so that, in general, where the diarrhœa was of long continuance, the intestinal ulcerations were vast and numerous: that is to say, the lesions were the same, but much more marked and ancient, than in those cases where the diarrhœa had been of long standing, but not continual.

Emaciation commenced, in one-half of the patients, with the first symptoms of the disease, whether it afterwards proceeded slowly or rapidly; with a third of the patients it only commenced with the fever. When diarrhœa became established, emaciation made rapid progress, and, unless some accident hastened death, it proceeded to the last degree of extenuation. Emaciation may afford a useful hint to the physician in his diagnosis in cases of latent phthisis. Where there are no local symptoms, but the patient is tormented with continued fever, with oppression and loss of flesh, this condition is generally the result of pulmonary disease. The emaciation affected equally all the tissues; the adipose cellular membrane disappeared almost entirely, and even the skin itself became thinner, and the diminution of the bulk of the muscles was not less marked.

The *countenance* had no particular expression: sometimes the face became gradually more pale, in others the colour was augmented, which appeared only rarely, and owing to particular circumstances. The surface of the body generally partook of the paleness of the face. There was occasionally a slight œdema about the ankles, and still more seldom of the whole lower extremity. The same appearance was seen now and then in the hand and arm, which announced a serous extravasation in the cavity of the chest; but these symptoms are not peculiar to phthisis.

A short chapter on the *Diagnosis of Phthisis*, including two or three cases, with the dissections, follows next in order: but it must be evident that the first period of the malady is the only one in which it is desirable to establish some precise diagnostic marks; but, on reading attentively what our author has urged upon these points, we feel compelled to say that he has added little or nothing to what has been observed before. The kind of cough, the nature of the expectoration, the dyspnœa, the wandering pains in the chest, and the imperfect sound produced

by auscultation, form altogether good grounds for suspecting the existence of the malady; and that, we believe, is all that can be said, though it has been repeated again and again.

Passing by the third chapter, which occupies three or four pages only, relative to the *peripneumony* or *pleurisy* attending the few last days of the patient's existence, we come to consider the *symptoms attending ulcerations of the Epiglottis, Larynx, and Trachea*.

Of eighteen individuals affected with the first of these ulcerations, six had no lesion either of the larynx or trachea. The symptoms attending ulcers of the epiglottis were a fixed pain in the upper part of, or above, the thyroid cartilage; a difficulty of swallowing, and the rejection of fluids through the nose; the tonsils and pharynx appearing to be perfectly sound. When the larynx only is affected, neither of the two latter symptoms are to be met with. In the absence of those symptoms proper to ulcerations of the larynx, a fixed pain at the superior part of the thyroid cartilage would, perhaps, sufficiently indicate the same condition of the epiglottis; at least, the following case renders such an opinion probable.

A tailor, forty years of age, of a weakly constitution, born of parents who died at an advanced age, was admitted into La Charité on the 18th October, 1824. He had never had any serious illness; was not subject to catarrh, but had been ill about fifteen months, and had been affected with cough the whole of that period. The cough had been dry for the first two months, afterwards accompanied with abundant expectoration, and soon followed by difficulty of breathing. Three months after the first attack, violent pains had been felt in the sides of the chest, had lasted fifteen days, and had been subsequently renewed at two different times, but for a shorter period. For the two last weeks there had been slight pains in the throat, hoarseness, and difficulty in swallowing. Perspirations had only appeared by intervals, and he had not experienced any cold chills. The appetite had gradually diminished. For six months the diarrhoea had been seldom interrupted; sometimes attended with gripings, which were stronger for the first eight weeks than afterwards. The emaciation and weakness dated from the commencement of the expectoration. The patient had ceased to work for six months, and had kept his bed for two.

On the 19th of October, his condition was as follows:—Countenance pale and thin; pricking pains at the upper part of the thyroid cartilage, with a sense of dryness of that part; swallowing somewhat impeded, although the pharynx and tonsils were in a natural condition. No marked sensation in the course of the trachea. Cough moderately frequent; expectoration scanty, not entirely opaque. Chest not sonorous under either clavicle, but particularly the right. The respiration tracheal; pulse accelerated; and great sensibility to cold. Appetite almost gone. Six stools within the last twenty-four hours. Not much thirst.

These symptoms went on increasing, without any alteration worth recording, until the 1st of November, when death took place.

In giving an account of the examination of the body, we shall restrict our extracts to those appearances which bear particularly on the symptoms connected with the air-passages.

In the neck, there was œdema of the glottis, one line and a half in thickness; in the neighbourhood of the aretenyoid cartilages, much less than that in the other parts. The mucous membrane of the epiglottis was more or less red; had some ulcerations on its lingual surface, as well as the lower surface, which was of an unusual brilliant appearance, and of the same colour. The larynx was in its natural state; but the mucous membrane of the trachea was red at its lower part.

The details of two other interesting cases of the same kind occur, accompanied by the dissection of the subjects, and which offer some varieties in the appearance of the epiglottis and the neighbouring parts, such as small ulcerations at the base of the tongue or about the pharynx. In one case, the epiglottis, the lateral ligaments, and the vocal cords, were entirely destroyed; but in both the aretenyoid cartilages were perfectly sound.

The symptoms produced by *ulcerations of the larynx* varied according to the seat, the extent, and depth, of the ulcerations. Out of five individuals where these ulcerations were only found at the union of the vocal cords, one only had the voice altered from the sixtieth to the twentieth day preceding death; after which the loss of voice was complete, and there was some pain about the larynx. The other four only felt a slight degree of dryness and heat in the throat during the last weeks of their existence. In nine cases, where the ulcers were small, superficial, situated within the ventricles, between the aretenyoid cartilages, or upon the lower vocal cords, there was hoarseness, an alteration to a greater or less extent of the voice, pricking pains in the larynx, and afterwards the voice became extinct, or nearly so. These symptoms were but slightly marked, and, excepting the hoarseness, were entirely wanting in two individuals. In three cases this hoarseness commenced eight days, and in the others six or eight months, before death. The pain had also nearly the same duration. Aphonia only existed in two cases. Where the ulcers were deep, and the vocal cords more or less completely destroyed, the same symptoms occurred, only with a greater degree of intensity; but they presented the greatest difference with respect to force and duration, so that we may regard a trifling pain of some duration in the larynx, joined with some degree of alteration of the voice, as the symptoms of a superficial ulceration; whilst a violent continued pain, often very severe, followed by aphonia during one or more months, indicate deep ulcerations.

Symptoms of *ulceration of the trachea*.—However numerous these were found to be, they never gave rise to any particular symptoms. In one case only, where the mucous membrane of the trachea was destroyed throughout the whole of its fleshy portion, the patient complained, a long time before death, of a feeling of obstruction placed above and behind the sternum, and soon afterwards a sensation of heat was also felt. There was nothing in the expectoration that denoted this particular lesion. These remarks are illustrated by an interesting case; and in another, where the disease of the trachea was still more considerable, no peculiar symptom was observable. It must also be recollected, that inflammation of the mucous membrane of the trachea, without ulcerations, sometimes takes place in the progress of phthisis; but there does not appear to be any thing peculiar in the symptoms.

We now come to the fifth chapter, containing the symptoms produced by the different lesions of the *mucous membrane of the Stomach*; and the first which M. Louis mentions are those produced by the softening and thinning of this membrane. At an uncertain epoch, commonly two, four, or more months before death, the patients affected with this lesion lose their appetites, and then experience severe pains in the epigastrium. Some time after this, nausea, and then vomiting, comes on; or occasionally these symptoms took the lead, and pain followed them. These symptoms existed in different degrees in almost every case. Three cases only presented no gastric symptom, notwithstanding the depth and extent of the disease of the mucous membrane. The pain was sometimes so violent as to absorb the whole of the patient's attention: it was generally a continued pain, though there were exceptions to this. The least pressure on the epigastrium was almost insupportable; and liquids taken at a common temperature, appeared as if iced. Opium did not sensibly decrease this pain, but Seltzer water often diminished it. Notwithstanding this disorder, some patients digested light food with tolerable ease; in others, food could only be taken at some particular hour, usually in the morning. When these have persisted for a certain time, the softening and thinning of the mucous membrane of the stomach may be considered as certain.

In eight individuals, *inflammation* of the mucous membrane of the stomach was met with: this was confined to its anterior face. But the symptoms accompanying this lesion do not appear to be very distinctly marked: and, in truth, we must be permitted to say that, in these, and some other minute distinctions which our author has drawn with reference to the precise seat of some of these affections, he seems to have carried his refinements to a degree of minuteness which we are inclined to

look upon with some suspicion ; at all events, we do not perceive their utility in a practical point of view.

Some of the changes which our author describes are extremely rare ; such, for example, as ulceration of the mucous membrane of the stomach, of which only three instances were met with ; and here pain in the epigastric region, loss of appetite, and slow and imperfect digestion, are the only symptoms indicating this lesion,—symptoms common to many other appearances.

State of the Tongue.—The chief diseased appearances of the tongue have reference, of course, to the condition of the mucous membrane of the stomach ; but in some cases the tongue was the seat of an albuminous exudation, more important to study than its mere redness. This exudation developed itself in the last period of the malady, four, eight, or ten, and sometimes even sixty, days before death ; sometimes under the form of patches of two or three lines in extent, and which, uniting together, occasionally covered the tongue throughout its whole extent. Now and then it appeared in the form of little grains, separated by spaces of greater or less extent, where the tissue of the tongue was bare, easily removeable ; this exudation commonly was renewed several times prior to death. In many instances, it appeared at the same time upon the tongue and on different parts of the mouth, the lips, cheeks, gums, and even the palatine arch. The tongue was almost always the seat of painful pricking sensations, and was more or less red and burning ; though there were exceptions to this.

In the state of the *male and female genital organs*, we find little to notice ; in the former, absolutely nothing worth extracting. With regard to menstruation, it generally ceased at a period of the disease more or less advanced. Once only it continued until death, but in a scanty and irregular manner. Our author, in mentioning the belief commonly entertained that pregnancy retards the progress of consumption, is inclined to doubt the fact ; for he observes, that, during pregnancy, some of the symptoms may be more obscure, though the disease is still pursuing its accustomed course : and, again, it may be easily conceived that, after delivery, these symptoms may appear more strongly marked than during gestation ; and, in fact, M. Louis mentions two cases, in which the phthisis and the pregnancy each continued their regular course. In one, the patient died twenty days after having given birth to a very robust infant.

Cerebral symptoms.—Nearly all the patients preserved their intellects entire until death : a few, however, in whose bodies a partial and pulpy softening of the brain was found, together with traces of inflammation of the arachnoid membrane lining the lateral ventricles, or of the tissue beneath, presented very

remarkable cerebral symptoms in the last days of their existence. These symptoms were wanting in three out of six subjects affected with pulpy softening. They were only found in one case of arachnitis, and this case is detailed at length. The symptoms with which we have to do were the following, and they came on three days before death. On the first of these days, there was an almost continual sleepiness, a slight disturbance of the intellectual faculties; but no pain was complained of. In the night of the following day, there were involuntary stools; the patient did not reply to questions, tried to rise, saying that he was about to return to his home, and fell to the ground. The next morning, at seven o'clock, his countenance appeared stupid; the eyes were fixed, the pupils contracted; the masseter muscles, and those of the right arm, were agitated with almost continual spasms; the left thigh and arm were rigid, and the slight motion communicated to them produced contortions of the countenance. The loss of sense was not perfect, for the patient made efforts to show his tongue when asked to do so. The pulse was 114 in the minute, and the respiration was not at all sensibly changed. These symptoms continued, with little variation, for twenty-four hours, when the patient expired.

In the sixth chapter, M. Louis discusses the *varieties of Pulmonary Consumption*, of which he notices two, the latent and acute phthisis.

Our author commences his remarks upon *latent phthisis* with the relation of a case, from which we collect that the disease was divisible into two distinct epochs. In the first there was fever without cough: this lasted about a year. In the second period, in addition to the fever, there was cough and expectoration. M. Louis here asks, whether phthisis may be said to have existed from the first period, or whether it began with the second? In considering that dissection showed no other organic mischief than that met with in the lungs, he is inclined to answer the question in the affirmative, especially since the fever preserved the same character in both periods, and as there was no previous catarrh. He is likewise disposed to think that tubercles can become developed in the lungs without any such exciting cause. Another curious fact connected with this case is the loss of appetite for upwards of three years, without any corresponding alteration being discovered in the mucous membrane of the stomach.

Five analogous cases next present themselves, in which the same minuteness of description, and the same accuracy of anatomical investigation, occur; but they add but little to the principal facts mentioned above, and are of a length that defy compression.

With respect to the proportion in which these latent cases of consumption are met with, we are told that, of 123 cases of phthisis, eight, or the fifteenth part, were specimens of this species. This proportion, though considerable in itself, is much less so than that which really exists, if, as we have observed before, the hæmoptoe which precedes the cough and expectoration is the effect, and not the *avant courier*, of the tubercles. This kind of hæmoptoe had, in fact, preceded the other symptoms in seven cases where the progress of the complaint had been considered as regular.

The eight cases of latent consumption above mentioned naturally divide themselves into two orders: in the one, the tubercles had existed a greater or less space of time before they caused either cough or expectoration, or even any general symptoms of consequence; in the other, they gave place to general symptoms of great intensity, such as fever, loss of appetite, and emaciation, long before there existed either cough or expectoration. In the one case, the weakness of the symptoms prevented the state of the lungs being exactly known or suspected; but, in the other, both on account of the difficulty of assigning these symptoms to any other lesion, as well as owing to the frequency of consumption, the existence of tubercles might be suspected; which suspicion an attentive search into local symptoms, or especially auscultation and percussion, would confirm.

Acute phthisis.—In the first case of this kind recorded by M. Louis, the disease ran its course in thirty-five days; the cough only existed twenty-five. The patient was a girl of eighteen, had not been accustomed to take cold, and had been only fifteen days ill when admitted into La Charité. In this case it is to be remarked, that mediate auscultation entirely failed in detecting any pulmonary disease. Three other cases of acute phthisis are next recorded, and in none of these instances was death delayed beyond the fiftieth day. There was no hæmoptysis in either case, and difficulty of respiration preceded, in one or two instances, the coming-on of the croup and expectoration: nevertheless our author, with the caution and candour which marks the whole work, observes, that the number of his observations has been too limited to enable him to give a general description of this form of consumption, or to describe the diagnostic signs of its first period; although he thinks it may be dreaded in those cases where patients are seized suddenly with dyspnœa without any apparent cause; if these symptoms go on increasing notwithstanding the application of appropriate remedies; and there are no symptoms of other pulmonary affections, such as peripneumony, pleurisy with effusion, or suffocating catarrh. In these cases, mediate aus-

cultation contributes somewhat to the diagnosis. In the second period, no doubt as to the existence of the malady can exist; since the changed appearance of the expectoration, and the state of the respiration, sufficiently explains the nature of the attack. Notwithstanding the rapidity of its progress, this disease, nevertheless, gives rise to those secondary disorders observed when its progress is more slow; such, for example, as ulcerations of the mucous membrane of the epiglottis and trachea, of that of the œsophagus and small intestines, stomach, &c.

Chapter 7th. *Symptoms of the perforation of the lungs by a tubercle opening into the cavity of the pleura.*—This perforation, pointed out by M. LAENNEC, is met with under two principal forms. Sometimes the tuberculous excavation, open in one or other of the pleuræ, communicates with the bronchiæ; at other times, this communication does not take place. In either case, the precise moment when the perforation happens is marked by severe symptoms, quite sufficient to establish a diagnosis. These remarks are illustrated by the relation of seven cases of this description, in which the sudden accession of pain was among the most prominent symptoms. This pain varies in its situation; in one subject it was referred to the spinal column: it differs also in degree of intensity, and is commonly attended with a difficulty of respiration, and an inexpressible anxiety, followed by all the marks of acute pleurisy. The detail of one case proves that a sensation of anxiety and suffocation, coming on in a sudden manner, may, independently of pain, lead to the suspicion of the same occurrence having taken place; but here again the sensations must be suddenly felt.

It is remarkable that the interval that has elapsed between these perforations and death, have been very various, differing from sixteen hours to thirty-six days, and it is not easy to explain why this should be. It does not appear to have been influenced by treatment, nor by the extent of the excavation, and consequent extent of the extravasation. The perforation took place at the same spot in five of the eight cases,—that is, opposite to the angle of the third or fourth rib. It is no less remarkable that seven out of eight instances took place on the left side, where, in fact, the tubercular affection is rather more frequent and more advanced than on the right side.

The subject of *Sudden Deaths* occupies the eighth chapter.—Our author observes, that the preceding facts show how many circumstances, foreign to the tubercular affection of the lungs, accelerate the death of consumptive patients; but there are cases in which it takes place still more suddenly. Sometimes the cause is made apparent by an examination of the body; at others, the most scrupulous researches lead to no satisfactory

conclusion. In the first case of this kind, death appeared to be produced by the rapidity with which the lungs had become hepatised, and consequently unfit for respiration. In fact, thirty-six hours before the death of this patient, the left side of the chest sounded properly throughout its whole extent, so that the whole, or nearly so, of the lung of that side must have passed into the second degree of inflammation within that space of time, according to our author; but then we must recollect that this opinion is founded upon the infallibility of mediate auscultation. In a second case where death took place suddenly, no diseased appearances, capable of accounting for it, were discoverable either in the chest or abdomen: but there was considerable œdema of the glottis, rather more considerable on the right than on the left side, and to this M. Louis is inclined to attribute the sudden dissolution of the patient. In answer to those who doubt this explanation, he replies by relating the case of a young man attacked with severe fever, and who died in the midst of a frightful suffocation, accompanied with a hissing inspiration, which only appeared two hours before his death. At the opening of the body, the glottis was found œdematous, and to the same extent as in the case of phthisis above mentioned. Our author has observed but two other cases of œdema of the glottis in consumptive patients, which, considering the frequency of ulcerations of the epiglottis and larynx, he thinks is singular.

In the second division of this chapter, we have four cases detailed, in none of which could the sudden death of the patient be accounted for by the most minute anatomical investigation of the body; though in two of the subjects considerable softening of the brain was observed, yet not enough of itself to account for the suddenness of their death.

Chapter the ninth treats of *the Causes of Phthisis*; under which head M. Louis examines the influence of sex, of peripneumony, of pleurisy, and of pulmonary catarrh, upon the production of consumption.

First, with regard to the influence of *sex*.—Of the 123 cases observed by M. Louis in the space of three years, 66 were females and 57 males; so that, at the first view, it appears that the former are more subject to consumption than the latter: this appears to be strengthened by another fact, which is this—in an equal number of men and women who died of chronic affections, and not of phthisis, a certain number of tubercles were found in the lungs, 25 times in the female, and only 15 in the male; so that, uniting both these facts, the proportion appears to be between male and female, as 70 to 92.

Influence of *peripneumony and pleurisy*.—Of 80 individuals, whose diseases, prior to the attack of phthisis, were carefully inquired into, three had experienced the year preceding an attack of peripneumony, and four had had the same disease some years before the appearance of

the phthisical symptoms, without having been more subject to colds in consequence, and without suffering any alteration in the state of their respiration: all of them were of a lymphatic temperament and feeble constitution; so that, taking all circumstances into consideration, it would not appear that either of the above diseases had any marked influence in producing consumption. M. Louis is well aware that this conclusion appears to be at variance with a crowd of facts, and especially with the observations of M. BROUSSAIS: but, says our author, pleurisy and peripneumony, either acute or chronic, are very common diseases among soldiers; and M. Broussais, having opened the bodies of a great number of subjects who died of one or other of these diseases, finding tubercles in the lungs of many of them, has concluded that they were the cause both of the pleurisy and peripneumony; but it is easy to perceive that, without a just comparison being made, and regular tables of mortality being drawn up, containing the number of those in whom tubercles in the lungs have been found after death, and who have died at the same age, in civil as well as in military hospitals, this question cannot be fairly answered. There are many other reasons also given by our author, which afford presumptive evidence of the justness of his conclusions.

Neither, in his opinion, is the influence of *pulmonary catarrh* more clearly made out than that of the above-mentioned complaints. Out of 80 individuals, who gave a distinct account of their maladies prior to the commencement of phthisis, only 23 were subject to pulmonary catarrh. This view of the matter is strengthened by the consideration that females, who are more subject to consumption than males, are less frequently attacked by pulmonary catarrh; so that the sex which seems the most exposed to phthisis is the least subject to one or other of these inflammatory affections, in the proportion of one to three.

The influence of *clothing*, particularly of wearing stays, is, according to our author, an assertion without proof; but we are surprised that he did not include in this article some remarks upon the custom of the female world to lessen the quantity of clothing when the temperature is actually lowest,—we mean at night; and the contrast between the heated ball-room and the external air. To these causes combined we may certainly attribute many fatal cases in this country, and especially in the upper ranks of life.

Regarding the influence of *hereditary predisposition*, our author observes, that a tenth part of the subjects were born of parents who, on one side or other, had apparently died of consumption; and he is inclined to believe that this proportion is even below the truth.

The influence of *age* is sufficiently marked. The number of those who die of consumption between twenty and forty years of age, is much more considerable than from forty to sixty; and M. Louis's remarks go completely to confirm those made by BAYLE on this point.

A few pages (as we before stated) on the *treatment* of phthisis conclude the volume: they certainly need not detain us, for they evince no superiority of practice, to which, indeed, M. Louis lays no claim.

MEDICAL AND PHYSICAL INTELLIGENCE.

PHYSIOLOGY.

1. *Experiments on the Secretion of Bile.*—IN order to determine whether the bile is secreted from arterial branches or from those of the *venæ portæ*, it is necessary to tie, either simultaneously or in succession, the excretory ducts, and the vessels which carry both kinds of blood to the liver. The ligature of these vessels, which has been considered impossible, may be easily performed upon rabbits; but, as their bile is but lightly coloured, the results are not very conclusive. In pigeons, on the contrary, there is some difficulty, on account of the hepatic artery; but, as positive consequences may be drawn from them, the experiments here related were all performed upon these birds.

1st. *Ligature of the excretory vessels.*—The bile being in the course of separation, and not being able to be evacuated, the liver swells, and becomes filled with globules of a bright green, which colour becomes spread over the whole surface of the liver and neighbouring parts: the green tint is more distinct in proportion to the age of the animal, and the length of time he outlives the operation. Ten or twenty hours after the ligature has been applied, the animal evacuates, by the anus, matter absolutely green, of the colour of the bile in the gorged liver, which colour of the excrements goes on increasing in intensity until the death of the animal; and it was found that the green matter by which it is produced only exists in the cloaca. This fact, united to the observations of PREVOST and DUMAS, who have succeeded in increasing the biliary secretion by interrupting that of the urine, demonstrates that the kidney and liver assist each other, more or less perfectly, respecting the excretion of their respective products, when it cannot take place by the natural channel.

2d. *Ligature of the excretory ducts and the hepatic artery.*—At the end of twelve hours, the surface of the liver receives a colour which also tinges the neighbouring parts; the canals become filled, and announce the presence of bile. Twenty hours after the ligature, the liver contains a great quantity of green granulations, more numerous on the left than on the right side; the cloaca also contains green matter, as in the last instance. If the life of the animal is prolonged for forty hours, the green colour of the liver and of the excrements becomes deeper. These experiments appear to prove that the separation of bile follows, and for a long time, after the liver has been deprived of arterial blood.

3d. *Ligature of the hepatic artery alone.*—In this case the liver does not become gorged, because the excretory ducts are free. After death, it is found that the secretion of bile has continued, since it is found in the ducts; and also the matters contained in the intestines present their usual bilious colour.

4. *Ligature of the roots of the vena portæ, and of the excretory ducts.*—The liver is then directly deprived of its colour, and has only a tint of pale rose-colour, analogous to that of the lungs of the same

birds; no trace of bile is to be met with; the intestine contains a grey or whitish pulp; the cloaca is full of excrement, without the least trace or mixture of green; and, notwithstanding which, many pigeons have lived in this state for thirty-six hours. Only tying the principal trunk of the vena portæ, to permit the gastro-hepatic veins to enter, the right lobe which receives them is, at the end of fourteen hours, in its natural state; whilst the left lobe is without colour, and presents on its outside merely a few traces of bile.

From these four series of experiments, the results of which perfectly agree with each other, it may be concluded—1st. That the ligature of the hepatic artery does not impede the secretion of bile. 2d. That the presence of bile becomes manifest when the excretory ducts are tied. 3d. That the blood of the vena portæ is that which furnishes the elements of bile, since by tying those vessels the secretion is arrested. (*Annali Universali*, Decembre.)

SURGERY.

2. *Extirpation of the Alveolar Arches of the Lower and Upper Jaw.*—Dr. GEORGE REGNOLI, of Forli, relates the following case, which we have, however, greatly abridged. On returning from Fossombrone, he was asked to see a poor woman, named Frances Rovinella, about thirty-five years of age, and the mother of four children, whose complaint was supposed to be incurable. The history of her disease was as follows:—She had suffered, from her infancy, violent pains in her teeth; the first set all became carious, and, falling out in separate pieces, were succeeded by the second dentition; these soon became also diseased: and, added to this, she was subject to repeated attacks of erysipelas about the head and neck. For about a year, however, the patient had escaped any attack of this kind; but, about November 1824, she was seized with a violent pain in the head, for which she took no remedy. At this time, whilst labouring under pain, tumefaction, and redness of the gums, caries of the teeth and alveoli of both jaws, she discovered that, opposite to the last molar tooth of the right side in the lower jaw, a little tumor existed, which speedily increased and ulcerated. This ulceration took possession of the alveoli and of the gums, both within and without, leaving untouched, however, the last molar tooth on the left side, which was not carious. Three months later, a similar fungus made its appearance on the corresponding part of the upper jaw on the right side, which spread with even greater rapidity, not leaving any of the teeth free from it.

On examining the woman, Dr. Regnoli perceived that there was an enormous enlargement of both the alveolar arches; a reddish and bloody fungus, which arose from the alveoli, and from the gums interiorly and exteriorly, so as to cover and hide the teeth. The alveoli were ulcerated and soft, even down to the very roots of the teeth, both within as well as outwardly, in both jaws; the cavity of the mouth was much diminished by the swellings, each of them exceeding the size of the thumb: it was easy, by means of the finger, to discover the limits of the disease. The woman complained of pain, increased during

mastication; the fungous substances bled at the least touch, and poured out a fetid ichor; and the health began to be affected. Nevertheless, the tongue, throat, and all the soft parts, appeared to be free from disease.

Dr. Regnoli persuaded this woman to enter into the hospital at Pesaro, for the purpose of submitting to an operation; and after being subjected for a few days to a proper regimen, and having been purged, the operation was performed on the 18th of May, 1825, in the presence of several physicians and surgeons. The patient was seated facing the light; the head supported upon the breast of an assistant, who at the same time made pressure upon the labial arteries, (*submaxillary?*) The operator then divided the whole of the lower lip, and detached it in a great measure from the lower jaw, in order to expose the fungus; he then cut circularly the soft parts and periosteum below all the alveoli in which the bone was healthy; and upon the fore and more prominent part of the chin, he employed a few strokes of the saw. At this point he inserted a strong cutting scalpel into the groove made by the saw, which he drove in with a few blows with a hammer, first directed to the left and then to the right side; the assistant, in the mean time, drew the jaw downwards and forwards; and the whole osteo-sarcoma was now removed, by merely dividing the soft parts adhering to the internal and concave part of the bone. The last molar tooth on the left side was, however, left untouched, but it did not show any marks of disease. The arterial branches, which bled profusely, were touched with the actual cautery, as were also the remaining parts in which any suspicious appearance was observed. The removal of the alveolar arch of the upper jaw was performed in the same manner; and the hemorrhage was arrested by the same means. The lower lip was then brought together with three needles, united by the twisted suture. At this time the patient fainted, but was soon restored.

The symptoms that succeeded the operation were, for the first days, severe pain in the head, and consequent deprivation of sleep, with fever, and considerable swelling of the face; which were all overcome on the sixth day, by bleeding, purging, and proper diet. On the 28th day, the cicatrisation of the wound was complete; a few pieces of dead bone having been removed some days previously. The appearance of the patient presented but little deformity, the lips turning inwards, but in no great degree; the speech is also somewhat altered; but she was able to eat even bread and meat, was free from pain; and the cicatrix of the alveolar borders was hard and equal, and they could bear to be pressed against each other without producing pain. (*Ibid.* Septembre.)

3. *New Cupping Apparatus.*—We have lately seen a simple and ingenious contrivance for facilitating the operation of cupping in the hands of inexperienced persons, and we have no hesitation in bearing testimony to its merits; as we believe it will be found to answer all the purposes designed by the inventor.* It is not intended that Mr. Clark's method should interfere with the modes already practised by

* Mr. Clark, of King-street, Holborn.

expert cuppers, as, when once acquired, nothing can be more simple. It is a notorious fact, however, that much practice is required to communicate sufficient dexterity in the old way; and, unless the dexterity, when acquired, is kept up by constant practice, it is soon forgot; so that the country practitioner often finds himself at a loss when called upon to perform an operation generally believed to be simple. Another advantage possessed by Mr. Clark's invention is, that it relieves the operation of much of its terrors, which, in children and nervous persons, ought to recommend it to the consideration even of experienced cuppers. The importance of this will appear when it is considered that fear tends to drive the blood from the surface, and thus defeats the object of the operation. In the army, where we understand it has already been partially introduced, and in the navy, the new cupping apparatus must be of use, as those unaccustomed to the operation are certainly much less likely to fail with it than with the common cupping glass.

Mr. Clark's improvement consists in introducing into the glass a narrow slip of silver, so thin as to be elastic, and thus readily to accommodate itself to the inner surface; from the centre of this is a little projection, which is perforated, and so contrived that a piece of silver wire, in size and shape like a common pin, is easily fixed to it; at the other end of the pin is a piece of sponge, or other soft substance, on which the spirit is to be poured. This is to be kindled, and the glass applied while it yet burns, the vacuum resulting being more perfect the sooner the application is effected.

MONTHLY CATALOGUE OF MEDICAL BOOKS.

* * It having been hinted to us that gentlemen, sending copies of their Works, prefer having their titles given at length, it is our intention, in future, to comply with this suggestion: but it is to be observed, that no books can be entered on this List except those sent to us for the purpose;—finding, in the lists hitherto transmitted, that the names of works have frequently been given as published, which have not appeared for weeks, or even months, after.

An Elementary Compendium of Physiology, for the Use of Students. By F. MAGENDIE, M.D. Member of the Institute of France; Physician of the Central Chamber of Admission to the Hospitals and Municipal Charities of Paris; Member of the Philomathic and Medical Society of Emulation; of the Medical Societies of Stockholm, Copenhagen, Wilna, Philadelphia, Dublin, Edinburgh; of the Academy of Sciences of Turin, &c. Translated from the French, with copious Notes, Tables, and Illustrations, by E. MILLIGAN, M.D. Fellow of the Royal College of Physicians, of the Society of Scottish Antiquaries; Corresponding Member of the Literary and Philosophical Societies of Manchester and Leeds, Extraordinary Member of the Royal Medical Society; and Lecturer on Physiology and Therapeutics, Edinburgh. Second Edition, greatly enlarged.—Edinburgh, 1826.

A Letter, addressed to the Medical Profession, on the Encroachments on the Practice of the Surgeon-Apothecary, by a new set of Physicians. By MEDICO-CHIRURGUS.—London, 1826.

Proceedings at the Seventh Anniversary Meeting of the Hunterian Society, held on the 8th of February, 1826: with the Report, and List of Officers and Members.—London, 1826.

METEOROLOGICAL JOURNAL,

From February 20, to March 19, 1826, inclusive.

By Messrs. WILLIAM HARRIS and Co. Mathematical Instrument Makers,
50, Holborn, London.

	MOON.	Rain gauge	THERM.			BAROM.		DE LUC'S HYG.		WIND.		ATMOSPHERIC VARIATIONS.		
			9 A.M.	MAX.	MIN.	9 A.M.	10 P.M.	9 A.M.	10 P.M.	9 A.M.	10 P.M.	9 A.M.	2 P.M.	10 P.M.
Feb.														
20		.16	46	47	38	29.72	29.93	66	74	WSW	W	Fine	Fine	Rain
21		.7	39	47	47	30.06	30.06	80	85	W	SSW			
22	○		49	51	47	29.85	29.89	84	84	WSW	SW	Cloud.	Cloud.	Fine
23		.33	49	49	33	29.76	29.79	85	75	WSW	WNW	S. Rain		
24			36	46	41	30.03	30.03	76	68	WNW	WSW	Fine		Rain
25		.27	50	52	35	29.87	30.03	87	75	W	W			Fine
26			41	47	41	30.26	30.28	75	67	W	SW		F n	
27			45	51	43	30.16	29.96	76	84	WSW	SW			Cloud.
28			47	54	42	30.08	30.06	82	76	WSW	W			Fine
Mar.														
1	☾		46	51	46	29.92	29.76	76	76	SW va.	SW			
2		.18	50	57	47	29.65	29.62	80	86	SSW	SW			Rain
3		.29	49	49	41	29.56	29.72	89	87	W	SW	Rain	Rain	Fine
4		.10	47	49	40	29.52	29.62	86	80	SW	WNW		Fair	
5			41	49	35	29.69	30.03	75	73	SW	SW	Fine	Rain	
6		.10	39	46	41	30.04	29.73	75	88	S	SW			Fair
7			51	54	48	29.71	29.81	89	88	SW	SW	Fair	Fine	Fine
8	●		50	56	47	29.93	29.92	88	80	S	S	S. Rain		
9			55	62	48	30.02	30.15	75	72	S	E	Fine		
10			57	66	51	30.20	30.20	70	68	E	E			
11			47	51	42	30.18	30.24	61	72	SE	ESE			
12			49	49	35	30.31	30.32	62	68	E	ENE			
13		.7	41	47	38	30.32	30.12	75	78	ENE	ENE			
14			45	51	41	29.85	29.83	78	73	SSW	SW	Rain		
15		.10	45	50	35	29.73	29.84	85	68	W	NW			
16	D		40	45	32	30.04	30.19	75	62	NE	ENE	Fine		
17			37	44	32	30.26	30.22	67	68	ENE	SSW	Fair		
18		.10	36	47	39	30.12	29.85	73	73	WSW	WSW			Rain
19			42	45	37	29.75	29.87	74	77	W	NW		Rain	Fine

The quantity of rain fallen in the month of February,
was 1 inch and 34.100ths.

NOTICE TO CORRESPONDENTS.

Communications have been received from Mr. HIGGINBOTTOM, Dr. VENABLES,
Dr. LEFEVRE, Mr. WADE, Mr. BROUGHTON, and Mr. RICHMOND.

ERRATA in our last Number.

Page 223, for Phthiscologia, read Phthisiologia.

— 224, for engaged extensive opportunities, read enjoyed, &c.

— 228, for these morbid alterations, read those morbid operations.

Medical and Physical Journal.

No 5 OF VOL. LV.]

MAY, 1826.

[No 327.

For many fortunate discoveries in medicine, and for the detection of numerous errors, the world is indebted to the rapid circulation of Monthly Journals; and there never existed any work, to which the Faculty, in Europe and America, were under deeper obligations, than to the Medical and Physical Journal of London, now forming a long, but an invaluable, series.—RUSH.

ORIGINAL COMMUNICATIONS,

SELECT OBSERVATIONS, &c.

ART. I.—*Case of Popliteal Aneurism, in which secondary Hemorrhage occurred, from the Ligature being thrown off by the Artery.* By P. M. BENJA, M.D. Medical Staff.

GIOVANNI MAUNNONI, æt. fifty, a native of Messina, has followed the employment of cook and private servant to officers and gentlemen in the Ionian Islands, for the last ten years. Last winter, while at Zante, his avocation obliged him to be exposed to a strong fire the greatest part of the day, for many weeks together. In February, 1825, he began to feel an uneasy sensation of weariness in the ham of the left leg; which, however, either diminished greatly or ceased altogether at night.

After a fortnight, he perceived for the first time a small tumor in the ham, the size of a hazel-nut, and throbbing strongly. The increase of this tumor, however, was very slow for the first two months, and did not give him much uneasiness. The patient states that a local practitioner applied the tourniquet at that period, some hours every day, for many weeks, but without any visible diminution of the tumor. The leg, however, was not œdematous, and the patient could walk without much pain or fatigue.

Seeing that his complaint could not be cured without an operation, he embarked for Italy for that purpose. The vessel put into Prevesa, where he landed. The tumor then had increased in size, and he could not walk with the same freedom as before embarkation.

When he arrived at Corfu, the leg was œdematous in a slight degree, but he could walk on crutches. Unfortunately, he was obliged to perform twenty days' quarantine, during which time I saw him occasionally in the lazaretto, suffering excruciating pains in the knee and leg: the tumor was increasing rapidly, and the leg and foot had become œdematous to a considerable extent.

Two days after he had taken pratique, he was admitted into my hospital; and then the case offered the following symptoms and appearances:—

Great emaciation; total loss of appetite, but in good spirits, and in full confidence of being saved by the operation; leg bent to nearly a right angle with the thigh, so that, when standing, there was fully a foot distance from the ground to the toes; a large irregular tumor in the ham of the left leg, measuring twenty-four inches (the knee included) in circumference, having displaced the tendons of the vasti, semi-tendinosus, and semi-membranosus muscles; the skin discoloured in the most prominent part of the tumor, its pulsation being deep and dull; leg and foot œdematous; articular arteries of the knee pulsating strongly. The patient suffers occasional, but severe, pains in the knee and leg; he is free from any fever. Temperature of the affected limb higher than that of the sound one, the former being 100° , and the latter 96° .

I showed the case to Dr. Hennen, inspector of hospitals, who encouraged me to undertake the operation; and I performed it accordingly on the morning of the 21st August, 1825, in presence of the inspector of hospitals, of Dr. Ryan of the 51st regiment, and some of the local practitioners. My friend, Mr. Roe, surgeon of the 28th, gave me his valuable assistance.

I made the incision on the upper third of the thigh, and having exposed the femoral artery for nearly an inch and a half, and carefully separated it from the accompanying vessels and nerves, I passed a double ligature under it, by means of a common aneurism needle. The ligatures were made of two threads each of common white silk; both ligatures were brought close to where the artery was still enveloped by the surrounding parts. The moment the upper ligature was drawn tight, the dull pulsation of the tumor ceased. Both ends of both ligatures were cut close to the knots, and the artery divided between them. The edges of the wound were brought together by straps of adhesive plaster, and a roller moderately tight was applied.

During the operation the patient had been faint, but more from fear than from loss of blood, having lost hardly two ounces. After having been removed to bed, he complained of a burning heat in the foot of the operated leg; said that he did not any longer feel the throbbing sensation in the tumor, which used to distress him betimes. Temperature of the leg nearly natural; bowels were opened this morning.

After two hours from the operation, the dressings became stained with arterial blood; but, it being in a very small quantity, and immediately checked by cold applications, it was

thought to proceed from some small subcutaneous arterial branches.

Vespere.—Complains of pain in the tumor, and of a sensation as if blood was descending from it towards the wound; the toes of the affected leg rather cold, but the foot and the leg of a natural temperature; complains of a painful throbbing in the wound. A bag of warm sand was applied to the foot. Tea and toast.

R. Tinct. opii, ʒss.

Aquæ menth. pip. ʒjss. M. fiat haustus hora somni sumendus.

August 23d.—Feels occasional and severe pains in the outside of the knee; tumor feels softer, and its circumference diminished by a few lines; limb hotter than the sound one. Complains of a sensation as if *lightning* [his own expression,] was passing from the knee to the wound.

August 24th.—Dressings removed. Skin of the wound healed; a small non-pulsating tumor was observed about the middle of the wound. At eleven o'clock at night, a most alarming hemorrhage took place; and, had it not been for the immediate assistance afforded by the person left to watch him, by pressing on the artery above the wound, the patient must have inevitably bled to death. Notwithstanding prompt assistance, he lost nearly three pounds of blood, which, in the exhausted state of the patient, induced great debility.

After some trouble, and with the assistance of Mr. Roe, the artery was secured again. The small tumor, which had been observed in the morning, was formed of coagulated blood, oozed from the upper end of the divided artery. Among the clots of blood, I could not discover the ligature, the casting-off of which had given rise to the hemorrhage.

September 8th.—From this time to the 8th September, he went on improving, and the slight discharge from the wound had nearly ceased: more than two-thirds of it had healed.

The emaciation of the patient is still very great, and such that the femoral artery is *seen* pulsating from the arch of the Poupart to the place where generally the profunda is given off; but, lower down, the pulsation is neither seen nor felt. A few small discoloured spots along the skin.

The outside of the heel, on which the whole limb has rested for many weeks, is very much discoloured, and some small spots along the outer margin of the foot. Œdema of the limb undiminished; sensation of it perfect, with the exception of the dorsum pedis, where it is rather dull; great toe colder than the remainder of the limb.

Sept. 12th.—Seeing that, notwithstanding the healthy appearance of the wound, the black gangrenous spot of the heel

was enlarging,—the œdema still the same,—the tumor stationary of late, although softer than before,—to remove all obstacles to the circulation of the limb, and to the free action of the lymphatics, I opened the aneurismal sac, and having broken down with my finger all the coagula of blood, I extracted some, and at each dressing forced out a great quantity of tough flesh-like fibrine.

Sept. 17th.—The sac was completely emptied of all its contents, and the œdema of the limb began to subside. The black spots on the shin are suppurating, and the edges of the gangrene in the heel are inflamed. The operation wound nearly healed.

Sept. 18th.—Symptoms of dysentery, with fever, dry tongue, and pervigilium. By the means of calomel and castor-oil, great quantities of bloody fæces were discharged. These symptoms continued very violent till the 20th, when they began to abate. The stools assumed a deep green colour, and lessened in frequency. The discharge from the sac was copious, purulent, and very offensive. No suppuration as yet round the gangrenous heel. Hot poultices and spirituous embrocations were made use of to hasten the separation of the slough.

Sept. 22d.—The operation wound has been healed these two days; but this morning, on removing the adhesive plaster, the centre of the cicatrix was exquisitely sensible, and, on separating its newly united margins, about two ounces of thin fœtid pus escaped. Suppuration from the sac copious, but healthy.

R. Decoct. cinch. \mathfrak{z} ij. ter in die. Wine at his dinner.

Sept. 25th.—The bowel complaint ceased. Discharge from the sac lessening, thicker, and not so offensive as before. No suppuration in the heel.

October 2d.—Discharge from the operation wound very trifling, that from the sac still healthy. The suppuration begun round the gangrene in the heel. All the other suppurating spots along the shin and foot healed. Foot still œdematous; not so the leg. Allowed to sit up in an arm-chair two hours a-day.

Oct. 20th.—Operation wound healed. The sphacelus of the heel cast off, and healthy granulations springing up. No discharge from the sac, its sides having adhered.

Oct. 30th.—A small abscess formed on the centre of the cicatrix of the operation wound, and, after a few days, one of the ligatures was discharged, apparently unaltered. The small abscess healed next day. He has been walking on crutches for nearly three weeks.

December 1st.—Another small abscess formed in the same place of the cicatrix, which, on the 18th of the same month, discharged another of the ligatures.

He has been now out of hospital these four weeks, (January

the 20th,) walking on crutches, and better in health than before his being taken ill with aneurism. When standing, he can touch the ground with the toes of the affected leg; nutrition and sensation of the limb natural. The gastrocnemii, the extensor longus, and flexor longus digitorum pedis, &c. have not as yet resumed their natural action, so that he cannot well move his foot.

The hemorrhage on the third day from the operation, (which indeed had begun a few hours after it,) was produced by the looseness of the upper ligature, which I can only account for by my having slightly pulled up the two ends of it after the first twist had been tied, to make the second,—which might have slackened the first. In fact, the oozing of the blood appeared soon after the patient recovered from fainting; but, on account of the tightness of the dressings, and of the slowness of the oozing, the blood coagulated, and opposed a temporary obstacle to further hemorrhage. When the dressings, and consequently the pressure, were removed, the ligature was cast off altogether, and hemorrhage ensued. Similar occurrences are not unfrequent; they have happened to Sir A. Cooper, to Mr. Cline, and to others.*

The opening and emptying of the aneurismal sac was productive of a great benefit in promoting the absorption of the fluids producing œdema, and in checking the sphacelus, which, after all, was produced more from pressure than from impeded circulation.

The ligatures seem to have undergone no change whatever, notwithstanding having remained for nearly three months among living parts. Very likely the third ligature will be discharged at some future period.

Had it not been for the upper loose ligature, I am confident that the operation wound would have healed by the first intention, and the cure shortened by many weeks. This case proves the safety of operating for aneurism in the same way (with regard to ligatures) as for amputations, viz. cutting both ends of them close to the knot; while, at the same time, it points out very strongly the necessity of great care in securing the ligatures, especially the upper one. It seems also to show that the silk is not absorbed, but generally finds its way out, sooner or later, through the cicatrix.

Corfu; 6th February, 1826.

* Vide COOPER's *Surgical Dictionary*, article Aneurism.

ART. II.—*Cases illustrative of the Efficacy of the Application of the Lunar Caustic in the Cure of Local Inflammation.* By JOHN HIGGINBOTTOM, Member of the R. College of Surgeons of London.

IN my little Treatise on the Lunar Caustic, I have given, at page 126, an account of three cases of inflammation of the knee, successfully treated by the external application of that remedy. It is my present intention to call the attention of the profession to another case of local inflammation, in the cure of which the application of the lunar caustic has been speedily successful.

It must certainly appear striking at first that the caustic should subdue inflammation, and it may be extremely difficult to account for the fact. But it appears to me not the less certain that, to convert the cuticle of an inflamed part into an eschar, does, in certain cases, prove a mean of almost immediately destroying the inflammation.

Thus, in a fourth case of inflammation of the knee, I have succeeded in speedily removing the disease by the caustic, even without the application of leeches or poultice.

A servant girl, aged sixteen, applied to me with inflammation extending over the fore part of the knee, for which no cause could be assigned except kneeling in washing the floors. There were much pain and swelling, and the skin was exceedingly tender and hard to the touch; the pulse was frequent; and the patient was feverish, and complained of feeling unwell. I directed an emetic and purgative, and applied the lunar caustic all over, and a little beyond, the surface of the inflamed part. In two days afterwards, the swelling had much subsided, and the tenderness was entirely gone; some vesication existed on the inside of the knee, occasioned by the too free application of the caustic on that part; but over the fore part of the knee, where there was most inflammation, no vesication had taken place. The case gave no further trouble, but got well in a few days.

Similar cases, under ordinary treatment, have continued for many days, or even weeks, attended with much inflammation, and sometimes suppuration even has taken place.

This power of the lunar caustic in checking the action of inflammation, is not less obvious in the following cases, in which it will be observed that a tense and painful swelling of the hand was, in the space of forty-eight hours, rendered soft and puffy, and deprived of pain and of all the inflammatory action.

A servant maid, aged twenty-four, applied to me with a swelling of the middle finger, and of the back part and palm of the right hand, attended by such pain as to prevent her from

sleeping in the night. She thought this affection had arisen from a puncture by a pin or needle, in washing. On examination, I perceived a small wound at the inside of the finger, at the first joint; and, on removing the skin by the lancet, a little pus escaped, and left a very small cavity. I applied the lunar caustic well within this cavity, and over and beyond the inflamed parts of the finger and hand, previously moistened with water, and left them exposed to dry. I directed an emetic and purgative medicine, and desired that the hand might be supported in a sling.

On the following day, my patient stated that her hand was perfectly easy, and had been free from pain from the time the sense of heat occasioned by the application of the caustic had subsided; she had passed a good night; the inflammation of the hand was completely checked in its progress; the swelling remained as before.

On the next day, the patient made no complaint; the swelling had become soft and puffy to the touch. In a few days more, the cuticle began to peel off; and in one point, where it was thick, there was a slight degree of tenderness. From this time there was no further trouble or complaint.

Another servant, aged twenty, slightly wounded the fore part of the index finger, at the first joint, by the bone of a hare, in dressing it. The wound healed in a day or two, and no notice was taken of it. In a few days afterwards, the finger became swelled and painful, and affected with diffused inflammation of an erysipelatous character, extending to the back of the hand, and there bordered by a ring of a more vivid colour. I applied the caustic nearly all over the finger, and upon the back of the hand, beyond the inflamed border.

On the following day, the swelling remained as before, and the patient complained of heat of the parts to which the caustic had been applied, and a small part of the finger, which had not been touched with the caustic, was very painful. I applied the caustic to this point.

On the succeeding day, the swelling had become puffy, and the whole finger and hand were free from pain. Several days afterwards, the hand was quite well. No medicine was given; nor was the patient prevented from pursuing her usual avocations.

This case was the more interesting to me, because I had had two similar cases a short time before, which had been occasioned by wounds received in cutting dog's meat, and which, under the ordinary treatment by lotions, had been several weeks in getting well.

The third case occurred in a country woman, without any assignable cause. There was much swelling of several fingers,

and of the hand; one finger, and the back part of the hand and of the fore-arm, were much swollen, and the inside of the hand and two fingers in a less degree; and there was much pain. This affection had been coming on for several days, and had entirely prevented the use of the hand; there was some fever, and the tongue was white. An emetic, and a purgative with calomel, were prescribed; and I applied the lunar caustic over the whole surface, previously moistened with water, and left the whole exposed to dry.

Three days afterwards, the patient called upon me. The swelling had entirely subsided, and no pain had been experienced after the heat induced by the application of the caustic had ceased. It is worthy of remark, that a degree of pain felt at first in the axilla had also entirely disappeared.

I have already suggested, that to induce an eschar over the seat of an internal disease or inflammation, may prove of great service. I repeat the suggestion here, in order that it may excite the attention of some of the numerous readers of the London Medical and Physical Journal, and so be the more speedily submitted to experiment.

Nottingham; March, 1826.

ART. III.—*Case of Diabetes, cured by Bleeding, the Vapour Bath, &c.* By GEORGE LEFEVRE, M.D. F.L.S. Member of the Royal College of Physicians, London. (Communicated by Dr. JAMES JOHNSON.)

LOUISA SUBIRON, aged fifty, of a melancholic temperament, and subject to frequent nervous attacks, but otherwise of a good constitution, and rather inclined to corpulence, became the subject of the following disease in the autumn of the year 1823.

She first applied to me in the month of June, and gave me this account of her symptoms, confessing at the same time that she had a long while concealed them, and that the distress she suffered now compelled her to seek medical assistance. She stated that for some time she had been tormented by excessive thirst, which she had endeavoured to allay, but in vain, by drinking copiously of refreshing beverages. The quantity of fluid which she drank in the course of the day, averaged from twelve to fourteen pints. She slept very badly, being obliged to drink frequently during the night; and, after some hours' sleep, her tongue was so parched that she could not articulate clearly till she had moistened her mouth. Her skin was dry and rough, without the least perspiration, which she could not excite by any means in her power. The bowels were obstinately constipated; the digestive functions much deranged, and the appe-

tite very much impaired. The nervous system was much shaken. She complained of giddiness in the head and of dimness of sight: when she read, she said "she continually lost her place." She complained also of much trembling of the knees, and wept frequently. She made no mention of the quantity of urine she secreted, which, however, was very considerably greater than the fluid she drank. She concealed this, either from *mauvaise honte*, or, considering the thirst as the only disease, she paid little attention to this circumstance. As to her previous state of health, it appeared that she had been subject only to nervous affections, whose origin was attributable to mental causes. During the previous winter, however, she had suffered much from pains in her loins, which were relieved by warm baths and opiates. The cessation of the menses, which took place more than a year previous to her present attack, was not accompanied by any unpleasant symptom, though she herself dreaded this period, from the fear of becoming dropsical, as several of her relations had died of dropsy soon after that epoch.

Upon the first view of the case, I was inclined to consider the whole as an hysterical affection, and I prescribed her some warm baths, and gave her the nitric-acid drink, with opiates at night. This practice was continued two or three days, with some relief to the thirst, but she complained of her nerves being more agitated, and ascribed it to the use of the acid. I determined, therefore, to compare the quantity of fluid she drank with the urine. The latter was about one-sixth part more than the former. M. Chevreuil, a chemist of celebrity, analysed, and found that it contained a very large proportion of sugar. No doubt remained, therefore, as to the disease in question. The quantity of urine voided at this period amounted to fifteen pints per day; it was of a pale straw colour, sweetish to the taste, and had a nauseous sickly smell.

Notwithstanding the shattered state of the nervous system, I was resolved to bleed her; the more particularly as the disease had been preceded by pains in the loins. Twelve ounces of blood were taken from the arm, June 16, 1824. It coagulated slowly; the crassamentum was loose, and the serum like whey. She felt herself immediately relieved, slept better than she had done previously, and felt stronger and lighter than before. The thirst was considerably diminished; the tongue became moister, but the skin continued dry. She was requested to live upon animal food, with but a small quantity of bread. The warm bath was prescribed every evening. Ten grains of the compound powder of ipecacuanha were given at bed-time. The bowels were moved by means of colocynth and calomel; and she was desired to drink equal parts of lime-water and milk

for her common drink. The quantity of urine voided the day previous to the bleeding amounted to twelve pints.

For some days all the symptoms rapidly diminished, but again returning, though in a diminished degree, the blood-letting was again repeated, and twelve ounces more were taken from the arm. It coagulated more rapidly than on the former occasion, and the crassamentum was much firmer, the serum more clear. (June 21.) She felt instantaneous relief, as before, expressing astonishment at feeling stronger after being bled.

Two days after the second bleeding, the urine was diminished more than a third; it was of a much deeper colour, and had more of an ammoniacal smell; it still yielded sugar on evaporation.

Not being able to excite perspiration, either by the use of the warm bath or by sudorifics given internally, and grounding the hopes of a cure principally upon the re-establishment of this function, I proposed to employ the vapour bath, and to endeavour to keep up the perspiration it might excite by hand-exercise. She was exposed (June 30,) during half an hour to vapour heated to 125° Fahrenheit. She perspired most profusely, and changed her linen and sheets three times during the evening. The following day she felt much more comfortable, but weak; she walked, however, a mile, warmly clad, and perspired freely. The urine was now reduced to five pints per day.

No change took place for several days; but, being prevented from taking exercise, on account of the rainy weather, her skin became again dry, and the vapour bath was repeated, July 10. She could not remain in the bath so long as before, on account of the profuse perspiration it occasioned. She felt weak for some days afterwards, and perspired freely without any bodily exertion.

All the symptoms of her disease seemed now to leave her: the quantity of urine was not greater than natural, and of a good colour; it yielded still a small quantity of sugar on evaporation. The digestive functions were quite restored. She slept better than she had done for years, and her spirits were wonderfully improved. She had gained also much strength, and walked two or three miles without being fatigued. She was now sent into the country, where she remained three months, improving generally in health.

She was attacked, in the month of August, with severe pains in her loins, such as she had before frequently experienced; the pains extended along the thighs as far as the knee. These symptoms were soon relieved by a blister applied to the loins, and by the use of the warm bath. Two days after, a diarrhœa came on, which soon, however, ceased. Since this period

(August 10, 1824,) she has complained of no unpleasant symptom. Every function performs its office naturally. She has taken no other medicine than a few opening pills during the last three months. At no period of the disease was the appetite the least increased.

As much change seems to have been produced upon her mind as her body: she is no longer gloomy and desponding, as heretofore, but gay and lively, and follows her usual occupation with more satisfaction than she had ever done.

The urine has been analysed to-day, (Nov. 8, 1824 :) it contains not a particle of sugar.

Paris; 1826.

ART. IV.—*Schirrous Affection of the Brain*. By R. WADE, Member of the Royal College of Surgeons, and Apothecary to the Westminster General Dispensary.

WILLIAM PAINTER, fifty-eight years of age, of a robust form and florid complexion, was attacked, towards the end of October last, with paralysis of the right side; for which he was bled largely, but without any immediate relief. On my first visit, three days after the attack, I found the patient in a comatose state, with stertorous breathing, and a slow full pulse; the pupils were much contracted, and immovable. When spoken to very loudly, and requested to put out his tongue, he would make an attempt to do so, but had not the power. When asked if he felt pain, he placed his hand on the left side of his head. Active depletion was adopted. In a fortnight he recovered his speech, and in a month was so far convalescent, as to be able to walk down stairs with but little assistance.

Notwithstanding strict injunctions to the contrary, he returned to his former habits, drinking his usual allowance of porter, and eating heartily of animal food: a relapse was the consequence, and in a few days he had a second attack of paralysis. His vision then became very imperfect. Depletion was again had recourse to, but not with the same success as before. He soon recovered his speech, but obtained only a partial use of the muscles of the affected side. When left to himself, he was either in a lethargic state, or talking in an incoherent manner. He would answer a question when spoken to loudly; and at times his conversation was rational, except that he had always a disposition to wander from one subject to another. Since the last attack, he has never been able to distinguish objects with any accuracy: a hat, for example, would be mistaken for a hand; and, in fact, a candle was the only object

which, when placed before him, he could rightly name, and that not always.

When other means had failed in affording relief, mercury was tried, and appeared to produce a decided improvement during the first six weeks: his vision improved, he became less comatose; indeed, all the symptoms were ameliorated. Although given in large doses, the mercury scarcely produced any effect on his mouth. This remedy, after a time, appeared to lose its beneficial influence, and was consequently discontinued. The coma increased; the sphincters of the bladder and rectum at length lost their power. He continued getting gradually worse, and died on the 9th of March.

No convulsions occurred during his illness, and the pupils were invariably contracted. For the last two months, he scarcely complained of any pain in the head. The pulse, until the last fortnight, was quite regular, being seldom above, and generally under seventy. The tongue was quite clean, and no irritability of stomach observed, although the bowels were very torpid.

I have since learned from the patient's friends, that, in the year 1810, he was employed as clerk in the Post-office at Portsmouth, and was then considered to be of sound intellect, with an excellent memory. In consequence of intemperance, he was soon obliged to leave this situation, and became agent to a newspaper office. Having occasion to go to London in 1813, he fell from the coach, and was obliged to return to Portsmouth. His conduct was then observed to be extremely inconsistent; but this, by his family, was attributed more to drinking than to the effects of the fall. Amongst other inconsistencies, he would order several joints of meat to be sent home at one time, with a corresponding quantity of vegetables. His memory was very imperfect, but no pain in the head was complained of. A few months after his fall, Mr. Painter, in consequence of misfortunes, was obliged to go to the Fleet, where he was detained ten months, during which time he was in a very desponding state. Soon after his return from confinement, he married a second time, and his wife has informed me that, ever since his marriage, he had at times complained of giddiness in the head, but seldom of much pain; that he would generally, if left unemployed, feel a strong disposition to sleep, which had much increased of late years; he would sometimes fall asleep immediately after breakfast. His memory was so bad, that, if asked to go to a shop for two articles, he would be sure to forget one of them. He was very seldom able to hold a connected conversation for any length of time, and would frequently talk to himself. Independent of the occasional giddiness and defective memory, his general health had been

extremely good, and he would often observe that he had never required any medicine. For some months before the paralytic affection occurred, the patient had been subject to startings in his sleep, and would sometimes awake suddenly, and begin to pray in the most earnest manner, but always in a desponding tone; then, without any obvious cause, his devotions would be succeeded by a fit of swearing. He could not be prevented from frequently rising in the middle of the night, to smoke his pipe. These are the principal facts worthy of remark.

Sectio cadaveris.—On removing the calvarium, which was very easily separated from the dura mater, an exostosis was observed on its internal surface, situated on the upper and middle portion of the right side of the os frontis, measuring two inches in circumference, and a quarter of an inch in thickness. All that portion of the dura mater pressed upon by the tumor was extremely thin and transparent, and had an opening in its centre, half an inch in diameter; a corresponding depression, of course, appeared in the brain. Not the slightest appearance of inflammation was observed around this part, nor did the pia mater any where exhibit the least marks of inflammation or congestion. The lateral ventricles contained about an ounce of serum. In the upper part of the left lobus cerebri, half an inch beneath its surface, a hard mass was discovered, of a light brown colour: this was readily separated, with the handle of a scalpel, from the surrounding portion of brain, which was, to some extent, of the consistence of thick cream. The tumor, when divided, resembled exactly in appearance the medullary sarcoma, as described by Mr. Abernethy; although, on examination, it was found to have nothing of the pulpy consistence so commonly observed in that disease. In its structure, it was much more like schirrus of the mammary gland; the largest portion of the tumor consisting of striæ, of a yellowish white colour, approaching in hardness to cartilage, whilst the remainder had a dark grey appearance, and was of a texture much less firm. After macerating the tumor for a few days, and comparing a section of the hardened striæ with a schirrous cardia in my possession, the structure of the one could scarcely be distinguished from the other. The tumor was about the size of a small hen's egg. With the exception of the schirrous mass, the brain was softer and less vascular in appearance than usual.

Whilst innumerable cases have been recorded, bearing ample testimony that scarcely any part of the human body is exempt from cancerous action, it would appear that the brain had been considered, by almost every author who had written on Carcinoma, as a privileged organ, happily possessing a protection against this destructive disease. In

the present pathological age, carcinomatous affections of the brain are seldom heard of, yet an occasional dissection has afforded undoubted proof that this organ is susceptible of that alteration of structure termed schirrus. Although this disease affecting the brain may, in the present state of our knowledge, be regarded, comparatively speaking, as of rare occurrence, yet it is not improbable that many of the hard masses occasionally found in either of its hemispheres, and described as scrofulous, might have been found, if more minutely examined, to have been of a schirrous nature. Dr. Baillie, in his excellent work on Morbid Anatomy, does not allude to this disease. In the second volume of the Medico-Chirurgical Transactions, Mr. Copland Hutchison, describes a case in which he found, on dissection, a schirrous tumor in the left lobe of the cerebellum: he states that the man, in whom the disease existed, had been ill for many months; that he remained sensible to the last, and always gave a coherent answer to every question; but, when not spoken to, he lay nearly in a state of coma, or low muttering delirium; which symptoms, however, only occurred a few days previous to dissolution. He never had a fibre paralysed.

In the fourth volume of the Medico-Chirurgical Transactions, another case is mentioned by the same gentleman, of a somewhat similar affection. Mr. Hutchison describes this tumor as a condensed, or rather indurated, portion of the left hemisphere of the brain, of the size of a hen's egg. It was occasioned by a wound from a cutlass, six years before the patient's death, over the left parietal bone. The symptoms described are—frequent fits of stupor, at irregular intervals; during the intermissions he was perfectly sensible; his pulse, pupils, and countenance natural; appetite good; no paralysis occurred; his bowels were torpid.

The case of Mr. Painter, when compared with others which have been described, will be found to bear, in many of its symptoms, a striking resemblance to them. The digestive functions remained but little disturbed nearly to the last; the patient preserved his usual healthy appearance till within a very short time of his death; his appetite was invariably good, he was constantly asking for food.

Delpech, in describing the symptoms of this disease, has alluded to the inclination for food in very strong terms: he observes, that “the patient appears to live only to eat,”—and sleep, he might with truth have added, as drowsiness has accompanied every case yet recorded. The paroxysms of pain in the head are mentioned by him as having been very severe: in the present case, however, they were very slight; indeed, so much so, as seldom to excite the attention either of the patient

or his friends; lethargy and loss of memory being almost the only symptoms observed, until within the last year, when occasional paroxysms of delirium occurred, but apparently untended by pain.

There surely can be but little doubt, from the preceding history, that the fall from the coach in 1813 was the origin of the mischief, as the patient's intellects had never been perfect after that occurrence. It is probable that, in consequence of the injury which the brain sustained from the fall, aggravated by the patient's intemperate habits, a low degree of inflammation was established, coagulable lymph became effused, and thus formed the nidus of the schirrous action which ensued.

In conclusion, I may observe, that it is a common remark that descriptions of very unusual diseases are more curious than useful, especially when, from their very nature, they are incurable. It should be recollected, however, that the apparent rarity of the disease may arise much from our own want of observation. This may fairly be concluded, when we consider the number of causes which, unfortunately for the advancement of our profession, so frequently happen to prevent post-mortem examinations. Whenever a tolerably accurate history of a disease, however unusual, can be obtained, it surely cannot be unreasonable to suppose that some practical benefit may ultimately accrue from ascertaining its organic changes, a knowledge of which may possibly assist the diagnosis of others.

April 1826.

ART. V.—*Case of Neuralgia, in which the Carbonate of Iron was successfully administered.* By S. D. BROUGHTON, Esq. Surgeon to His Majesty's 2d Regiment of Life Guards, and to the St. George's and St. James's Dispensary.

A CONSIDERABLE mass of experience having tended to produce some grounds for confidence in the exhibition of the carbonate of iron in neuralgia; and the nature of this remedy not appearing to offer any objection to its employment, I was induced to make trial of it in the following case.

On the 1st of November, 1823, I was consulted by a lady, residing in the neighbourhood of London, in consequence of her having suffered great pain on the left side of the face during the previous six weeks, the last fortnight of which her malady had been greatly aggravated. Her rest had been disturbed, and she had fallen off in health and appetite, and was much emaciated. She described the pain to be situated chiefly in three distinct places, the temple, the inferior orbital region, and the side of the chin, with a general aching of the left side of

the head, and soreness of the integuments of the face covering the parts enumerated. Latterly there had been seldom any suspension of pain altogether, but violent paroxysms succeeded each other rapidly, resembling the shocks of electricity and the stabs of a sharp instrument. Some degree of puffiness about the left eye occasionally appeared. The bowels had been generally irregular, and the tongue was furred.

My first efforts were directed to the digestive organs, and, having cleared the bowels with calomel, salts, and senna, I prescribed forty-five drops of the *tinctura opii*, to be taken at bed-time; which was followed by a better night's rest than she had long enjoyed. The opiate was repeated on the second night, with similar benefit; but the paroxysms returned in all their violence on the third day. I then determined upon trying the carbonate of iron, keeping up the action of the bowels by moderate aperients, during which the tongue became improved in appearance. I began with half a drachm of the carbonate of iron three times a-day, directing the patient to resort to the opiate as before, if necessary.

On the 8th of November, the patient declared the violence of the pain to have been much reduced; so much so, that the opiate had not been repeated. She had enjoyed some sleep at nights, and was consequently much improved in appearance. The doses of the powder were then doubled.

On the 11th of November, the patient was still going on well. The chief seat of the pain was at the chin, and she declared it to be then bearable. She, therefore, proposed taking the powders twice instead of three times a-day, imagining their effects upon the stomach to be injurious.

The last week in November, she omitted the powders altogether, in consequence of profuse menstruation, accompanied by a furred tongue, loss of appetite, and a sensation of heat at the pit of the stomach. Calomel, magnesia, rhubarb, and ginger, were resorted to with benefit; and the carbonate of iron, in doses of one drachm, was again prescribed, in conjunction with rhubarb and ginger, three times a-day; the original malady having slightly increased.

The powders were continued, though irregularly, throughout December, up to the middle of January. The patient generally felt disposed to omit them when relieved from pain, but immediately resorted to them on its recurrence. About the latter end of January, the stomach seemed to be affected with acidity, when (the neuralgic affection having been subdued,) she left off the powders altogether, substituting soda-water in small draughts, and mild aperients with magnesia.

About the middle of February, the paroxysms of pain returned, violently and in rapid succession at intervals, disturbing

her sleep at night. After a dose of calomel, salts, and senna, the opiate draught was renewed, with the same temporary benefit as formerly; the paroxysms returning after the anodyne effects had gone off. The carbonate of iron was then renewed, as prescribed latterly, in doses of one drachm; great attention being paid meanwhile to the state of the digestive organs.

At the end of March, 1824, the powders having been rigidly persevered in, and no paroxysms of pain in the face having returned during three or four weeks, the powders were gradually left off.

Up to the present period (more than two years having elapsed,) this patient has not experienced any symptoms of the neuralgic complaint, under which she laboured periodically for the space of about five months, from the latter end of September, 1823, when she was first attacked, to the beginning of March, 1824, when she returned to society and the enjoyment of her usual health and spirits.

The extent to which the carbonate of iron was prescribed in this case, certainly falls far short of that to which it has been pushed of late; and, from the length of time which the malady took to be entirely subdued, one might, perhaps, reasonably infer that much larger doses, and a more constant perseverance in them, where the stomach will bear such treatment, may produce a quicker termination of the complaint.

The affection above described appeared to be of that genuine neuralgic kind called *tic douloureux*; and it is remarkable, that neither attention to the digestive organs, which were throughout extremely irritable, nor the use of laudanum, produced any permanent relief; while the administration even of smaller doses than ordinary of the carbonate of iron was invariably followed by the mitigation, and finally by the total removal, of the pain, although it was not without some difficulty that the stomach was at any time capable of receiving the medicine.

I may add, that I have used the carbonate of iron in other cases of neuralgia, both idiopathic and from injury, and with benefit; but the circumstances of these cases were not so strongly marked, and accurately followed up, as this now detailed.

London; April, 1826.

ART. VI. — *Case of a Steatomatous Tumor under the Tongue.* By JOHN BACOT, Esq. Surgeon to the St. George's and St. James's Dispensary.

THOMAS WHITEHEAD, aged about forty years, residing at No. 15, Crown-court, Brewer-street, was admitted under my care at the St. George's and St. James's Dispensary, on the 20th of March. The account which this man gave of his complaint

was as follows:—Between six and seven years ago, he perceived a small swelling, about the size of a pea, under the integuments immediately beneath the chin, to which, as it produced neither pain nor inconvenience, he paid no attention: it, however, continued gradually to increase in size, and about a year ago its growth became more rapid, extending upwards within the mouth, until at length it encroached so much upon that cavity as to render deglutition difficult, and to impede his speech. So much, indeed, was the articulation interrupted, that it required some attention to make out the history which the man detailed. Upon looking into the mouth, the cause of the impediment of speech was sufficiently obvious: the tongue was not only greatly enlarged, but the tumor had pushed its way beneath that organ, so as completely to invert its usual position,—the inferior surface being turned upwards almost in contact with the roof of the mouth, and the apex forced backwards and a little to one side, in fact, nearly touching the left tonsil. That portion of the tumor which was situated below the chin was about the size of a pullet's egg, and appeared to contain some fluid, though the sense of fluctuation was not very distinct. It seemed to have no attachment to the larynx, nor to any of the important parts in the neighbourhood; and, on pressing the tumor upwards, the tongue was forced against the palate, so that it would have been easy to have produced suffocation by continuing the pressure. The man was unable, of course, to masticate or swallow solid food, and he was deprived of the sense of taste almost entirely. Excepting those inconveniences, however, the disease was not attended with any painful sensation.

In order to remedy this poor man's miserable situation, I proposed to make an incision in the direction of the tumor under the chin, believing it to be encysted, and probably filled with steatomatous matter; and then to puncture the cyst or lay it open, as might appear most advisable. This plan meeting with the approval of my colleague, Mr. Broughton, with his assistance, and in presence of the pupils, on the 23d of March, I made a vertical incision in the direction above mentioned, pursuing the dissection through the muscles. Finding that the sense of fluctuation was now much more distinct, though the cyst was situated more deeply than I had anticipated, I finished the operation by pushing an hydrocele trochar into the tumor. On withdrawing this, a small quantity of steatomatous matter escaped through the canula, but it was too thick and tenacious to flow out with great rapidity. The man had become very faint, and being unwilling to enlarge the opening if I could possibly avoid it, it was determined to retain the canula in the wound, through which the contents of the tumor conti-

nued to drain; the enlargement of the tongue having already decreased in some degree.

The next day, however, the canula having been permitted to escape from the wound, I was sent for in great haste. The swelling, both externally as well as within the mouth, appeared to be larger than before the operation, so that the patient was unable to speak at all, and appeared to be threatened with immediate suffocation: I therefore passed a probe into the opening made the day before, and then, with a common probe-pointed bistoury, enlarged the opening, so as to permit the passage of the canula of a large-sized trochar. A great quantity of cheesy matter now escaped, though mingled with fragments so thick and tenacious as to block up the canula completely, and to require the probe or director to be passed into the opening from time to time, in order to clear it out.

During the three following days, the tumor went on decreasing rapidly.

On Monday, the 27th March, Whitehead was enabled to swallow with more ease than for many months previously; and on that evening, whilst in the act of drinking, a great quantity of the same kind of matter suddenly gushed forth from the orifice, which was kept open either by a canula or director, which the man was enabled to pass into the cavity himself.

In the course of the following week, the tongue (which, though enlarged, preserved a healthy appearance,) began to resume its natural situation; so that yesterday, the 7th of April, the man was enabled to protrude it from the mouth, as usual. No vestiges of the tumor remain, excepting that the tongue yet appears to be too bulky at its lower surface, arising, most probably, from the long continuance of the disease.

It should be mentioned that, on the day succeeding the operation, Whitehead complained of much pain in the larynx, which was completely relieved by the application of leeches.

I have chiefly been induced to relate this case, because it appears to be somewhat uncommon. I do by no means wish it to be understood that the mode of operating which I adopted was the best that might have been pursued, because it is evident that, had a freer incision been made in the first instance, or a larger-sized trochar been employed, much of the embarrassment that afterwards was met with would have been avoided; but, as the situation of the tumor, as well as the appearances it produced, were unusual, the relation of this case may, perhaps, be useful to those who encounter a similar one; and this I conceive to be the principal, if not the only, benefit to be derived from the publication of solitary cases.

South Audley-street; April 10th, 1826.

ART. VII.—*Account of Diseases of the Eye, as they prevail in some Parts of India; with the Results of the Operations for their Removal.* By GEORGE RICHMOND, Assistant Surgeon 4th Light Dragoons.*

Abstract of Diseases of the Eye, treated at Poonah by Surgical Operations, from the 6th of May to the 12th of December, 1824.

Diseases.	Restored to good Sight by Operation	Restored to good Sight by Operation; but, by the imprudence of the Patient, Inflammation was brought on, which destroyed the Eyes.	Total Number restored to good Sight by Operation	Restored to a degree of useful Sight by Operation	Total Number of Cataracts, Artificial Pupils, and Pterygiums, successfully treated by Operation.
Cataracts	407	29	436	43	479
Artificial Pupils	9	..	..	3	9
Pterygiums	2	..	..	..	2
Total successfully treated by surgical operations					490
Restored to good sight by medical treatment					14
General total restored to sight					504

By referring to the table of diseases, it will be perceived that, in the course of seven months and twelve days, 479 cases of cataract have been successfully treated; nine cases of closed pupil, and two of pterygium, have been equally so by operations; and fourteen with diseased cornea have received good sight by medical treatment; which, when added together, will make a total number of 504 blind restored to sight.

A great number of these patients, on whom the operation for cataract has been performed, can read the figures of a watch without the aid of glasses; a medium which would nearly perfect their sight, if assisted by them.†

Those who are stated in the column of diseases to enjoy but a small degree of vision, though already highly useful to them, would also be greatly benefited by the assistance of these glasses; because in most of them the imperfection of sight is owing to the flatness of the cornea dependant on old age.

Twenty-nine having lost their sight after it had been restored to them by operation, was caused by the patients not being

* We think it proper to state, that the Report containing these observations is countersigned by JAMES FRENCH, M.D. assistant surgeon 67th Regiment, and CHARLES DUCAT, M.D. civil surgeon, Poonah.—EDITORS.

† These glasses can be purchased in England for a shilling a pair.

under restraint, nor willing to submit to any kind of medical control. Many who received sight in one instant rejoiced so exceedingly, that they became impatient of remaining a few days with their eyes bound up; and after they had left me, to enjoy the pleasure of vision and the sight of their friends, uncovered their eyes, and admitted the strong beams of light on the retina, which had been for years secluded in darkness, and was consequently unable to withstand the first impressions of light without exciting inflammation. On comparing this loss with the general success of operations for cataract, it will be found that it has occurred in about one in twenty.

Though I have not the least reason to complain of the want of confidence of the natives, yet I find them unwilling to submit, after treatment, to any painful remedy; for, had these people subjected themselves to the ordinary means employed in averting inflammation, I am certain their sight would have been preserved.

The disadvantageous mode of operating on the natives of India, militates materially against the propitious result of practice; for, after the operation is performed, they are allowed to go wherever they please, and follow their own inclinations. But, to overcome these inconveniences, and to prevent succeeding inflammation as much as possible, the eye undergoes very little disturbance during the operation; so that in most cases no after treatment is required, except the occasional application of a few leeches to the temples.

To manage the natives with readiness, it is absolutely necessary to do much with one stroke of the instrument; light must be given in one instant, and with as little pain as possible. This can always be done with a hard cataract; but one that is soft, and will not bear the pressure of the needle, requires some time to be removed from the axis of vision. I, therefore, always apprise the patient of this probable incident.

I have many times passed a needle through the walls and humours of the eyeball, without the patients showing the least symptom of pain. They remained as firm and steady as if nothing of the kind had taken place; and, when questioned regarding the degree of pain, some answered they felt none, others felt a little. I am, therefore, of opinion that, with a highly-polished instrument, the operation of couching may be always performed, and the cataract laid down below the axis of vision, so as never to rise, without the patient feeling any more pain than that of blood-letting, and frequently not so much.

During the time I have been in Poona, the number of applicants amounts to 820, many of whom have been saved from blindness by the timely interference of medical treatment. About 100 people with incipient cataract have also applied for

relief, but, not being completely blind, I could not think of proposing an operation, but informed them that a total deprivation of sight would most probably ensue in the course of eighteen months or two years, and the eye would then be in a proper state to receive assistance by operation. I have not noted down any of these people's names, because they did not actually come under medical treatment. Adding all these to the number last mentioned, will make 920 applicants.

A few weeks ago, I went down to the river's side, where an old blind woman resided: the structure of her left eye was totally destroyed, but the right contained a fine cataract, which was removed in an instant, and sight restored. In less than half an hour after this operation, a crowd of lame and blind surrounded me, among whom I found ten were blind with cataract. On them I continued operating on the bank of the river till it grew dark, when I found I had but operated on eight, of whom seven had received good sight: the other one did not derive any benefit, on account of the principal nerve of vision being diseased. I then returned home, leaving two for operation, who followed me the next day, and received sight.

On another day, in presence of two gentlemen, by operation I restored fourteen out of fifteen to good sight; and on another day I went a course of forty miles, to Sassoor, and villages adjacent to it, in company with Drs. French and Ducat, who very kindly assisted me to perform twenty-eight operations, out of which, twenty-seven proved successful; and within the space of two days, with the same gentlemen, I rode a course of fifty miles, to Telligahum and villages lying round it, where I operated with success on twenty-seven cases of cataract.

Many of these patients included in this abstract came from the neighbouring villages of Poonah, and some from the distance of 150 miles.

Abstract of Diseases of the Eye, treated at Ahmednuggur by Surgical Operations, from the 8th of January to the 8th of March, 1825.

<i>Diseases.</i>	<i>Restored to good Sight by Operation</i>	<i>Restored to good Sight by Operation; but, by the imprudence of the Patient, Inflammation was brought on, which destroyed the Eyes.</i>	<i>Total Number restored to good Sight by Operation</i>	<i>Restored to a degree of useful Sight by Operation</i>	<i>Total Number of Cataracts and Artificial Pupils successfully treated by Operation.</i>
Cataracts	205	4	209	13	222
Artificial Pupils ..	..	..	..	4	4
Total successfully treated.....					226

In the course of the first month after my arrival here, I restored sixty-six blind to sight; and in the course of the second, 156; making 222 successful operations of couching and extraction of cataracts: 150 of these were found in the town, and seventy-two in the neighbouring villages. Thirteen received sight only to a partial degree, but to such extent as to render them essential service.

Four men, who were blind from closure of the pupils, were restored to a degree of sight very conducive to the common purposes of life. These, added to the number above, make a total of 226 blind restored to sight in the space of two months. One hundred and two, with other diseases of the eye, were at the same time either cured or relieved; which raises the number of applicants to 328.

One boy, six years of age, who had been in a state of blindness four years, arising from cataract, received sight by the operation. Another boy, twelve years of age, who had been blind ten years with the same disease, was also restored to sight by the operation.

From the imperfect account which the parents and the children gave me of the date and origin of their blindness, I am strongly inclined to infer that they were born blind with cataract: although they got good sight, they did not know the name of any thing until they learned it. In support of this opinion, I beg to mention that, when I was at Poona, there was brought to me a boy, five years of age, who was said to have been blind three years with cataract. A few days after the operation he recovered sight, but two months elapsed before he learned the names of common things around him, and understand the meaning of the term vision. Sometimes he appeared to be more stupid and awkward than when he was blind. In consequence of these circumstances, his parents concluded I had done him no good: I was convinced, however, that he saw well; and it was not long till he became a fine active boy, and capable of discerning very small objects. This happy restoration to sight, as he was heir to a large property, was the more eagerly desired by his parents.

By comparing all the circumstances in the cases of these three boys, it will be observed, that blindness was not perceived in them till they began to walk, and probably to stumble, when the attention of the parents was arrested, and drawn into the examination of the causes. In the case of all the children, the near coincidence of time from their birth to the time of their supposed bereavement of sight, is striking, and to me conclusive that they were born blind: for the parents of the two boys agree in reporting that they did not perceive the want of sight in the children till they were about two years of age; and the

mother of the boy who was ten years blind said, that she did not perceive his loss of sight until he had arrived at the age of eighteen months.

In contrasting these cases with the following one, the subject will be still further illustrated. A boy, twelve years of age, who had been blind eight years of one eye, from closure of the pupil, and had the structure of the other destroyed. The moment the new pupil was cut out, he uttered with vehemence that he saw much light, and became so overjoyed, that his parents could not restrain him within the walls of the hospital. He romped through the house in such a manner, and examined every article so minutely with his hand and eye, as to raise suspicions of his honesty. At the end of five days, he left the place, without the least stigma on his character.

When this boy was deprived of sight, he was double the age of any of the other three, and he therefore became acquainted with his native language. The recollection of things which he had seen eight years before was not entirely effaced from his memory, so that, after he received sight, the presentation of these things recalled the remembrance of them. But, owing to the early deprivation of sight, and the long space of time which elapsed while in that state, the muscles of the eye not having been called to act in the various degrees of compressing and steadying the globe, could not at first adjust the focal point, and required some time for that purpose, though the lens was left in perfect health. But in the other boys, who had been deprived of sight at an earlier period of life, and had their lenses removed, the motions of the eyeball were strong and involuntary, requiring some weeks before each individual muscle was brought under its own function, in fixing the eye on an object.

I hope to be pardoned for the digression I have made from the tenor of my Report; but the subject of congenital cataract is so interesting, and especially the extent to which it prevails among the natives, that I could not think of letting this opportunity pass without notice.

Several times I travelled thirty-five miles a-day among the neighbouring villages, and in the course of the day restored twenty blind to sight. On three other excursive days, I restored fifty-two to sight. I went on one occasion into Jamghaum, a village belonging to Scinda, where I restored eight blind to sight, and received great civility from the inhabitants.

Those patients who resided at a considerable distance from Ahmednuggur, I did not revisit till sixteen days after the operations, when I found some of them, without any person to conduct them, traversing the fields, and visiting their neighbours in different parts of the villages. This space of time,

which had been allowed to elapse from the date of my first visit, showed the result of the operations, and enabled me to give a correct account of their success.

Although these patients were left entirely to the natural consequence of the operations, without medicine or the application of a single leech to the temples, and exposed to the baneful effects of a tropical climate, only two eyes were lost by inflammation in the villages, and two in the town of Ahmednuggur; so that the proportion of losses is one in fifty-four.

On my return to these patients, I found many whose eyes were without the least redness, pain, or symptom of having been operated on, at so late a period. Some of them conveyed me out of the villages, and held me by the coat, until they made me acquainted with a sense of their heartfelt gratitude. The favourable termination of these cases, I beg to mention as a proof of the extreme mildness of the operations. With respect to soft and fluid cataracts, I have been able to dispose of their substance in such a manner, that the eye cleared up in sixteen days, and enabled me to report on them with accuracy.

I find almost all classes of people equally liable to cataract, and, if any difference exists, I am inclined to think that it prevails most among the peasants, artisans, and coolies, because these people are greatly exposed to the causes of cataract, and are compelled to earn their bread under the baneful effects of the climate. In villages, I find as many cataracts, proportionally to the number of inhabitants, as in large towns. Occasionally, when I find twenty or thirty people together on the road, I ask leave to look at their eyes, and not unfrequently I find in the group one or two eyes blind with cataract, which I immediately remove, and send them away with instructions to call on me.

In the case of some who had undergone operation for cataract, I found the common spectacles, ground so as to throw the focus a considerable way back, so far supply the place of cataractous glasses in improving vision, as to enable them to read their native language.

In answer to a letter of the 7th December, 1824, which I had the honour to receive from the Honourable the Governor in Council, through the Medical Board, directing me to turn my attention, more particularly than I had done, to the instructing of native practitioners in the knowledge of diseases of the eye, and the method of performing the various operations on it for the recovery of sight; I have the honour to state, that I lost no time in endeavouring to carry these instructions into effect.

I informed the native practitioners that I had received orders from government to teach them every part of this branch of the

profession; that the great aim of government was to ameliorate their condition, by diffusing knowledge among them. I pointed out to them how much advantage it would be to themselves to learn to restore sight without risk of destroying the eye; and this was to be accomplished in no other way than by studying the structure of the organ, with which I would make them acquainted, if they would favour me with their daily attendance; and would also teach them an easy and ready method of removing cataract.

Accordingly, eight Mussulman practitioners regularly attended me; and, on those days on which they anticipated operations, they were punctual to the appointed time, and seemed much pleased when I employed them as assistants. After they had been with me a few days, they manifested a strong desire to be made acquainted with the principles of the operations; and they appeared much gratified at the simplicity of couching.

The power of belladonna in enlarging the compass of the pupil, and giving a full view of the cataract, and thus showing the operator, when the needle was in the eye, so to direct its point as not to lacerate the structure within the organ, excited their admiration.

I frequently demonstrated the structure of the eye to them, and taught them the site of the lens which, in consequence of disease or injury, formed cataract; but this they appeared to have some difficulty in understanding, until I extracted a number of cataracts, and laid them on their hands, when they examined the form and substance of them, and were much pleased at the disease being extracted. This step was the best I had yet found for giving them a correct idea of the subject. They were always ready to assist me, and willing to learn, but lamented their utter inability to procure instruments and belladonna. Had my continuance been longer in the place, I have no doubt I should have been able to carry on their knowledge, for they often frequented my lodgings for the purpose of being taught.

The instruments with which they operate is an old rusty lancet, with the point broken off, and coarsely ground to an oval form: with it they pierce, or rather lacerate, the coats of the lower hemisphere of the globe, behind the iris; then pass a triangled copper probe through the lacerated orifice into the eye, and endeavour to depress the cataract.

In old people, where the vitreous cells are obliterated, and there is no adhesion between the lens and its capsule, they succeed in one in seven, or one in eight cases. But, where a fortuitous attachment between the lens and its capsule has been confirmed by disease, and the vitreous cells remain unbroken,

the prospect of success, with instruments like theirs, whoever he be who uses them, must be feeble. I have made this calculation from cases that came before me, and must say, that, if they have been so fortunate as not to commit mischief, by bringing on insuperable inflammation, and destroying the structure of the eye, they have at least done so much injury as to bring on amaurosis, and prevent the image from being depicted on the retina.

Since writing this Report, one of the Mussulman practitioners mentioned in the preceding part of it, has just returned from a distance of twenty-four miles, and informed me that he there restored five blind to sight, with an old needle which I gave him.

APPENDIX.

The city of Poona is supposed to contain 100,000 inhabitants;
the number of blind restored to sight there was 504

The town of Ahmednuggur is supposed to contain 20,000 inhabitants; the number of blind restored to sight there was 226

General total restored to sight in the course of nine months 730

Cataracts in the above number removed with success 701

The number of artificial pupils made with success 13

Pteryguims removed 2

Number of blind restored to sight by medical treatment 14

General total of blind restored to sight 730

On comparing the size of these towns with those in Europe, I am of opinion Poona contains only 80,000 inhabitants, and Ahmednuggur 15,000.

COLLECTANEA MEDICA:

CONSISTING OF

ANECDOTES, FACTS, EXTRACTS, ILLUSTRATIONS, &c.

*Relating to the History or the Art of Medicine, and the
Collateral Sciences.*

*Floriferus, ut apes, in saltibus omnia libant,
Omnia nos, itidem, depascimur aurea dicta.*

ART. I.—*Report made by M. MAGENDIE to the Academy of Sciences (at their Meeting, July 1825,) on the subject of a Boy, named Honoré Trezel, Deaf and Dumb from his Birth, who obtained Speech and Hearing under the care of Dr. DELEAU, Jun. (From the Edinburgh Journal of Medical Science, No. ii.)*

AT the sitting of the 10th May, 1824, M. Percy made known to the Academy, that a deaf and dumb boy, named Trezel, had lately acquired hearing under the care of M. Deleau. The success had been as complete as could be desired. The child, who before the operation was entirely deaf, had been enabled to hear all descriptions of noise, and even to notice certain intonations of the voice.

But Trezel was, notwithstanding, far from having acquired the knowledge of sounds, though he enjoyed the faculty of hearing. An immense interval still separated him from children of his own age, who were possessed of a good organisation. Noises of all kinds, the accent of the voice, the words which were addressed to him, as well as those which he endeavoured to form in his larynx, were only to him a source of new sensations which delighted him; but he drew no other use from them. He was ignorant of the great advantages of language, and perfectly unaware that the vague and strange sounds that he sometimes produced with his vocal organ, might be the means one day of enabling him to express his wants and his thoughts. A melancholy experience has, in other instances, shown that if such a deaf and dumb patient, under these circumstances, be merely left to the care of his family, his sense and his intelligence will remain in a state which is not much superior to that in which he found himself before his cure had been completed. As soon, therefore, as Honoré Trezel had obtained the faculty of hearing, such an education was required as might be a substitute for that which his infirmity had prevented him from receiving, and which should enable him to avail himself of the sense that he had just recovered so happily. At the meeting in which M. Percy announced the result of the operation performed upon the young Trezel, he added, that M. Deleau was engaged in the instruction of this child, and that he would make known the result of it to the Academy. M. Deleau has kept his promise.—Trezel was presented to you in one of your last sittings. He repeated from memory the fable of the Fox and the Crow, performed different exercises of analysis; and you have been

enabled to judge yourselves of the state of his hearing, of his voice, and of his degree of intelligence, after nine months of assiduous care. This fact is so much the more important, as none of the deaf and dumb, who have obtained the faculty of hearing by an operation, or who have acquired it spontaneously, have been observed a sufficient length of time by men of information, who could inform us what change had been effected in them, by a new sense intervening all at once in the midst of senses already tried; or who could make known what alterations have taken place in the intelligence, the instinct, the speech, or the motions of such individuals, by the development of a function so important as that of hearing; or, lastly, who could acquaint us whether a person born deaf and dumb, and who has acquired hearing, is capable of entering into all the relations of social life, or whether he is not apt to step out of their bounds. It is evident that many interesting physiological questions connect themselves with the treatment of M. Deleau; and for this reason commissioners were appointed by you, who have considered it their duty to collect and verify all the circumstances of the case. What I am going to relate is an abstract of the report made on the occasion.

Claude Honoré Trezel, now ten years of age, born at Paris, of poor parents, was of that class of the deaf and dumb who did not even hear the most violent noises, or the loudest explosions. His forehead was large, and his head well made; but his physiognomy, the image of his intelligence, had little expression. He dragged his feet in walking; his gait was tottering; he did not know how to blow his nose; and had, in other respects, received no education adapted to his situation. He made his principal wants known by a definite number of signs.

The operation which was performed was not a new one; it was invented towards the end of the last century by a deaf person of Versailles, who, fatigued with his situation, succeeded in curing himself. It is now adopted by all physicians who treat disorders of the ear; it has, above all, been frequently employed in practice by Dr. Itard. It consists in injections of air, or of different liquids, into the drum of the tympanum, by the tube which ends in the back part of the mouth. It has many serious inconveniences, which happily did not present themselves in the case of young Trezel.*

The days which immediately followed an accession of hearing, were for Honoré a period of rapture. The noises which he heard gave him ineffable pleasure; he sought them with avidity: on hearing a musical snuff-box, he was in a sort of extasy. But there was a certain time required before he could perceive that speech was a medium of communication; besides he attended at first, not merely to the sounds which were formed, but to the movements of the lips by which they were accompanied; and thus he believed, during some days, that a child seven

* It has been explained, in a separate work published on this case, that injections of water, by means of a small flexible sound, were forced into both the Eustachian tubes. These injections were not either accompanied by those dreadful pains which sometimes determine fainting, and oblige the treatment to be suspended, or followed by abscess and suppuration in the drum, which resist all hope of cure.

months old spoke like grown-up persons, merely because he saw his lips make movements. But he was soon taught his error; and he was aware from that time that it was to the sounds he should attach importance, and not to the motions of the lips.

But it unfortunately happened that he heard a magpie pronounce some phrases. In generalising on this particular fact, he concluded that all animals were gifted with speech, and consequently was anxious to oblige a dog to speak, of which he was very fond. He even resorted to violence to make him say *papa*, *du pain*, the only words that he could himself yet pronounce; but the cries of the poor animal terrified him, and he desisted from his attempt.

These first periods of hearing produced a great change in the physical state of Trezel. His gait became more firm; the mournful expression of his face was changed into a smiling and gay air; he learned to blow his nose, and ceased to drag his feet in walking.

A month had passed away, and Honoré remained nearly at the same point. Absorbed by his sensations and his new remarks, he could not comprehend the different syllables which formed words; and nearly three months were necessary before he could distinguish some compound words, before he could know their sense, and that of short and simple syllables.

It was likewise a length of time before he knew the direction of sound. A person having concealed himself in the room where the boy was employed, called out to him, but it was with considerable difficulty Trezel discovered the hiding-place of the individual who hailed him; and this discovery was much more owing to the eye, and to the reasoning at which he had arrived, than to the employment of the ear.

All the interest, however, which Honoré felt in the sensations procur'd him by his hearing, had not prevented him from making one observation of the greatest importance,—his larynx formed sounds; and to the pleasure of hearing them was superadded that of being able to produce them. It was in this that Trezel's case displayed the most curious and the newest phenomena.

The instrument of the voice is composed of a great number of different parts, among which are found muscles, bones, cartilages, and membranes; consequently, it would have been wonderful if, without some preparatory exercise, all these parts, all these organs, had acted at once in concert, so as to produce vocal sounds and appreciable articulation: this, as we ought to expect, did not happen. The first sounds that Trezel was enabled to utter were dull and heavy; he pronounced, not without difficulty, A, O, U. The two other vowels came much later; and the first words that he formed were *papa*, *tabac*, *du feu*, &c. But, when he wished to repeat more complicated words, he made a multitude of contortions of the lips, of the tongue, and of all the agents of pronunciation, of the use of which he was entirely ignorant, resembling, in this respect, a person who begins to learn the art of dancing or swimming, and who exhausts himself in useless efforts and ungraceful movements.

But, induced by temptations, he acquired the pronunciation of some compound words, which had at first been beyond his abilities.

It was at the moment of making this attainment, that he conceived himself on a level with other children of his own age. Satisfied with himself, therefore, and proud of his new situation, he treated his old companions in misfortune with great disdain, and wished to see them no more. Few persons who had seen him at this time would have discovered in him a happy disposition.

But, notwithstanding this little emotion of vanity, Trezel advanced slowly in pronunciation. He left out a great number of syllables, or rather he articulated them in a very defective manner. Perhaps he would never have overcome this difficulty, if recourse had been merely had to his organs of hearing, but an appeal was likewise made to his sight. Different syllables were delineated for him, and from this moment he pronounced them much better, comprehending with much more clearness the assemblage of vowels and consonants, and the reciprocal influence which these exert upon each other. Thus a very remarkable fact was proved,—namely, that the association of the sight with the movements of the larynx was prompt and easy, while that of the hearing and of the organ of the voice was always difficult, and was only exercised with slowness. For example, as soon as Honoré perceived written syllables, he pronounced them, if at the same time they were reverberated close to him; but, if the table on which the letters were traced was carried away, in vain were certain syllables articulated in his ear in the most distinct manner possible; to articulate them himself was an impossibility. He comprehended much more easily the affinity of sounds to written letters, than to the action of his larynx.

By constantly adhering to this mode of proceeding, Trezel has learned to read and write with sufficient rapidity, but after a manner which is similar to that of persons who learn a strange language, and who, in general, read it and write it long before they can speak it. Up to the present moment, Honoré reads with his eyes, and writes infinitely better than he speaks.

His pronunciation is very defective. The Rs in particular rumble in his mouth in a most singular and disagreeable manner. The different varieties of accent seem unknown to him; but, when we consider the point from which he set out, we ought to be fully satisfied to see in him the degree of instruction which he displays in so short a time.

Honoré exhibits another phenomenon, which has excited the attention of the commissioners of the Academy. When a word is said distinctly to him, he repeats it immediately; when he is hailed, for instance, he does not fail to pronounce his name; it only appears of consequence to him to reproduce the word which he may have just heard. If his instructor would wish to address himself to his mind, he employs for the purpose gestures or expressions of the countenance. It is by signs only that the youth expresses himself with ease and quickness, and it is only by the employment of these signs that a judgment can be formed of his intelligence, and of the quickness of his conceptions.

In this point of view, Honoré presents a phenomenon highly interesting. Having acquired a new medium for the expression of his ideas, it might be supposed that he would have neglected the method, so greatly inferior to speech, of which, until then, he had availed himself. But,

up to the present time, the contrary has happened; his natural language, namely, that of signs, instead of being lost and gradually replaced by speech, has rapidly improved, and acquired a perfection and quickness much superior to that which it displayed before he had recovered his hearing.

However, in his connexions with children of his own age, Honoré begins to employ simple words, and particularly substantives, to make known his principal desires. Perhaps the time may arrive when he will make a more frequent and complete use of speech; but in this respect it is possible that he may always remain far below other men. For we have numerous examples of children who may be called dumb, only because there requires in them a certain effort of the ear to comprehend words, and rather a difficult exertion of the larynx to speak. Finding, by the employment of signs, an easy medium of communication, they neglect to exercise the ear and the organs of speech, and thus remain classed among the deaf and dumb, when in reality they are neither dumb nor deaf.

But to return from this digression.—Honoré Trezel, who had been completely deaf, even to such a degree that a year ago he did not hear the loudest detonations, now listens attentively to all noises, knows when they come from afar off, distinguishes their character, avoids carriages and horses, and goes to open a door when any person knocks. He knows how to appreciate the musical rhythm, and takes pleasure in listening to singing and musical instruments; he tries even to imitate the modulated voice, without, however, having been yet able to succeed. He knows how to appreciate and repeat all the articulations of our language; he comprehends, he analyses, repeats from memory a certain number of phrases within his capacity, and he replies to them. He executes what his instructor by words directs him, but with other persons he is not yet able to do this; for the same reason that we comprehend a foreigner when we are accustomed to his pronunciation, and for the same reason that we are entirely incapable of comprehending him when he speaks to us for the first time.

Here are assuredly results sufficiently gratifying. When we take into consideration all that this child has learned before arriving at his present condition, as well as all the ideas and new combinations of them which have been indebted for their operations in his mind to the instinctive associations which have been established between his ear and his intelligence,—between these, again, and the organs of voice,—between his ear and his larynx, we have no difficulty in flattering ourselves with the hope that his moral condition and his physical state will continue to improve.

But let us not anticipate the future; let us rather wait the result of experience, which in this, as in all new questions, can alone enlighten us.

Your commissioners think that the efforts of M. Deleau to impart the blessings of social life to beings who, in a great degree, had been separated from it by nature, are deserving of the eulogium of the Academy; that the results at which he has arrived in the young Trezel, are very important, and worthy of the most lively interest. They

propose to you to engage M. Deleau to continue the education that he has so happily begun; to multiply, as much as possible, observations of the same kind; and thus to lay the foundation of a species of instruction or education, which ought to be esteemed among the number that ameliorate the condition of the human race.

(Signed)

DUMERIL,
GEOFFRY ST. HILAIRE,
MAGENDIE, *Reporter*.

ART. II.—*Case of a Wounded Nerve, followed by severe Consequences, and cured by removing the Wounded Portion of the Nerve.* By GEORGE BELL, Esq. F.R.S.E.; Fellow of the Royal Colleges of Surgeons, Edinburgh and London; Surgeon Extraordinary to the King, and Surgeon in Ordinary to His Majesty's Household for Scotland. (From the same.)

THE affections and injuries of the Nerves, including contusions, wounds, and the different varieties of *tic douloureux*, which fall, almost exclusively, under the care of the surgeon, have always excited much interest and anxiety, both in the patient and practitioner, not only in consequence of the extreme pain usually accompanying them, and the uncertainty of the influence of the remedies employed, but of the long continuance of the symptoms, the ill health, and sometimes the fatal consequences resulting from them.

As the older anatomists were unacquainted with the minute anatomy of the nervous system, we need not be surprised that the contemporary surgeons should be ignorant of its pathology; and, therefore, that their treatment of its surgical diseases should be conducted upon almost empirical principles. Thus we find a number of detached cases, dispersed in various books of general surgery, as well as in the *Ephemerides* and other periodical publications on the continent, and in this country, treated as diseases or injuries of the nerves, where, in fact, the diseases ought, in many instances, to have been sought for in the veins, the aponeurotic expansion, or in an erysipelatous affection of some other tissue. But the indefatigable exertions and accurate investigations of Wrisberg, Monro, Reil, and other great anatomists of the last century, followed more lately by the researches of Bichat, Sir Everard Home, Scarpa, Mr. Charles Bell, and others, have cleared away many of the difficulties connected with the anatomy, and rendered the pathology of the tissues so intelligible, that we may not despair of seeing the treatment of surgical diseases, and affections of the nerves, reduced to as great a degree of simplicity, and to as fixed principles, as many others coming under the care of the surgeon. More especially, I cannot help anticipating great improvement, not only in the surgical but in the medical treatment of nervous affections, from the labours of Mr. Charles Bell, when his *Exposition of the Nervous System* comes to be generally read and understood.

In the mean while, I am persuaded that the faithful narrative of unequivocal cases, may, in this as in other subjects, induce practitioners to bring forward those of the same kind they have met with, and thus

form a body of detached information, which may be classed when our knowledge is more matured. With this view I am induced to offer the history of a case, where, I have every reason to believe, a nerve was punctured in the operation of bleeding, where the symptoms soon became extremely urgent and interesting, and where a cure was effected by a complete division and removal of the parts surrounding the wound.

On the 7th July, 1802, I was desired by Dr. James Hamilton, professor of midwifery in this University, to visit with him a young woman, who had been bled ten days before in the median cephalic vein of the right arm.

When I saw her, the tendon of the biceps was much contracted, and the forearm bent to an acute angle with the arm. The fingers also were firmly clenched, and she could neither allow them or the arm to be extended, without suffering the most excruciating pain. On examining the arm, no swelling of it was perceptible, and the wound of the vein was completely healed; but, when this spot was even gently pressed, she complained of great uneasiness. The pain was not confined, however, to the neighbourhood of the wound, but extended down the forearm to the very tips of the fingers, and stretched upwards along the inside of the arm to the axilla, thence to the clavicle, pectoral muscle, and even the short ribs.

The pain was, to a certain extent, constant, but occasionally considerable exacerbations were experienced; and at these times she was seized with startings, tremors, and subsultus tendinum, and other nervous symptoms. The pulse was 110; she was hot and restless, her tongue dry and parched; she had a general uneasiness over her whole body; in short, all the symptoms of fever. As she was of an irritable habit, and easily affected by slight impressions, and every internal medicine and external application that Dr. Hamilton could think of had been used, without producing any sensible good effect, before I saw her, there was much reason to apprehend that tetanus or locked jaw would soon supervene, unless relief were obtained from the division of the nerve which we had no doubt had been wounded.

As I was obliged to perform the operation by candle-light, when it would be extremely difficult, if not impossible, to dissect from the neighbouring parts so minute a nerve as that which probably was wounded, I determined to remove a considerable portion of the vein which had been opened, so that I might be certain of including the injured nerve within the two incisions.

I was induced to adopt this plan from another consideration, as it occurred to me that there was little chance of my being able to divide the nerve precisely at the place where it had been punctured; and, if it was only divided in one place, either above or below the puncture, or even both above and below, the numerous anastomoses which connected it with other cutaneous nerves might prevent the success of the operation.

With this view, and with the concurrence of my friends, Dr. Barclay, who attended in consultation, and Dr. Hamilton, an incision, about three inches in length, was made through the skin along the course of

the vein, commencing an inch and a half above, and terminating at the same distance below, the wound which had been made by the lancet. The vein being laid bare, and separated from the tendinous aponeurosis, two ligatures were thrown round it, at an inch and a half from each other, and equi-distant from the wound of the vein. The ligatures were then tightened, and the intermediate portion of vein divided as close to them as possible, and removed.

When the ligature was tightened on the upper part of the vein, she complained of considerable uneasiness, much greater than that which she felt on tightening the ligature on the lower part.

On dividing the vein, the cut ends retracted to a considerable distance from each other, and the pain which she felt previous to the operation immediately disappeared. She moved her fingers with the greatest freedom, extended and bent her arm, and performed all the motions of the wrist and elbow joints with perfect facility. The pain of the side, of the axilla, and all those symptoms which rendered the operation necessary, seemed to be removed; and she now complained of no farther uneasiness than that which a wound of equal extent in any other part of the body would have occasioned.

The sides of the wound were drawn together, and retained in contact by slips of adhesive plaster; a pledget, compress, and bandage, completed the dressings. She was placed in bed with her arm extended on a pillow, in such a manner that the flexors of the forearm were completely relaxed.

On the following morning (8th) I found she had slept well, by the aid of an opiate: the sleep had not been disturbed by any startings, tremors, or other nervous sensations, with which she had been affected previous to the operation. She lay as easy and was as comfortable as could be expected, considering the constrained posture in which she was placed. During the night, however, her fingers were again contracted, probably from the superior power of, or irritation applied to, the flexor muscles, or possibly from the irritation excited by the ligatures of the vein; but, although she could not extend them at pleasure with ease, she could permit them to be moved in every direction, without increase of pain.

On the 9th, she complained of slight uneasiness in the fingers and forearm; but these sensations seem to have been occasioned by her having passed a restless night, and having been obstinately costive. A dose of compound powder of jalap was therefore given, which operated copiously in the course of the day, and an emollient poultice was applied to the wound.

10th.—She slept well during the night; has no symptoms of fever; the pain of the arm relieved, and the wound has an healing appearance.

12th.—Remains easy and free from fever. Ligatures were removed this forenoon, and the pain which the upper one seemed to have occasioned is gone. The wound is now dressed with adhesive plasters.

From this time she continued quite well as to her general health, complaining occasionally of a sense of stiffness or numbness in her arm, though not to a greater extent than was reasonably to be referred to

the wound made in the operation. The wound was healed on the 1st August.

In this case, I have no doubt that at least a permanent contraction of the elbow-joint, if not an attack of tetanus, was prevented by the operation having been performed so soon after the infliction of the injury; and I would be disposed to hold it out as a case affording encouragement not to delay removing a portion of a partially wounded nerve, producing symptoms similar to those above detailed, where the nerve is accessible to the knife.

But, although an early operation is in all cases advisable, yet, if it has been neglected or unavoidably postponed, the experiment ought to be made even at a very protracted period from the accident, and when symptoms which, when diopathic, are generally considered incurable, have supervened. The propriety of this is exemplified by the following case:—

A young woman, sixteen years of age, when engaged in her domestic duties, cut herself with a knife, about three fingers' breadth above the wrist, wounding both the artery and nerve. The arterial blood was soon stemmed, the wound healed; and there remained only a little pustule, resembling a bilberry. Some few months afterwards she became affected with fainting fits, and applied to Volchamer for advice. He inquired minutely into the history of her complaints, and suspected an injury on the head; but, on being shown her arm, to the injury on which, and the loss of blood, she attributed her complaints, he (taking the pustule for an incipient aneurism) directed a surgeon to apply caustic, which was done so effectually that a large eschar separated. The wound was kept open as an issue for six months, and the young woman had no return of fainting fits.

Volchamer observes that, unless you cut out, or burn out, a wounded nerve, convulsions are very likely to take place.

A case of the same description, but with a different result, has been kindly pointed out to me by Dr. Milligan, who was a witness to the progress of the symptoms while the lady was in this country, and has repeatedly heard of her since her return to Ireland, where she still resides.

This lady, at the age of twenty-two, was bled on the 7th June, 1819, in the median basilic vein of the left arm, for a stitch in the left side. She immediately complained of pain in the wound; went to bed three hours afterwards, and soon experienced extreme uneasiness in the left shoulder. At three in the morning, she was attacked suddenly with spasms of the extensors of the hands and nerves; great anxiety, restlessness; pain at the scrobiculus cordis, increasing for several hours, when the muscles of the neck and back became affected, and the body bent backwards, as in opisthotonos; the muscles of the upper and lower extremities, and the pectorals, acting in the most violent manner. These spasms continued for six minutes, and then went off. She took large doses of laudanum from the commencement; 580 drops being given within the first twenty-four hours without relief, the spasms returning frequently during the day and night. These continued for a

very long period to return incessantly; so that she took 44,000 drops of laudanum in the space of two months; and she is to this day annoyed by frequent renewals of the disease, whenever she is agitated by any vexatious or unforeseen occurrence.

In this case, if a portion of the vein had been removed within a moderate period after the wound was inflicted, she might have been relieved at least of a part of her suffering. And even at a more distant period, as in the case related of Volchamer's, I would not despair, but would give the patient a chance for being cured, unless some important contra-indication should present itself. This leads me to detail briefly the outlines of another case of wounded nerve, which occurred to me early in practice, and where the patient recovered from a long continued and highly excruciating disease.

In the month of June, 1805, a lady, about twenty-six years of age, the wife of a surgeon in Lincolnshire, applied to me, when suffering severely under symptoms of violent nervous irritation, apparently connected with a wound which she had received two years before, when cutting a loaf of bread; the knife having slipped and divided the artery, and probably injured the nerve of the thumb, on the radial side of it, half way between the first and second joints. The pain was excruciating at the time, but the wound healed kindly; yet the pain continued, and was accompanied by startings, twitchings of the flexors, bending of the thumb, and great general irritability. Various opiates, without large doses of which she had never slept since the reception of the injury, and every expedient that could be thought of, were employed by her husband and the medical gentlemen who attended her; and on two different occasions, at a considerable intervening interval, an incision was made through the soft parts to the bone in the neighbourhood of the wound, but with slight and only temporary relief. When she came to Edinburgh, her general health had suffered much, from the long continuance of the painful spasmodic symptoms; and now the pain was sometimes so exquisite, and her mind had become so irritable, that I dreaded mental derangement would ensue. Before removing the thumb at the second joint, I requested Dr. Monro (secundus) and Mr. Russell to see her. Mercury was proposed, and tried; but the symptoms increased, and we were glad to lay it aside. When the mercury seemed to have left the system, the thumb was removed; the twitchings and painful contractions were soon relieved; her mind became less irritable, and she returned home in five or six weeks, restored to perfect health.

I consider the cases which I have just briefly detailed, as well marked examples of nervous or tetanic affections produced by a partial division or injury of a nerve. I am aware, indeed, that the wound or prick of the nerve was not demonstrated by dissection, and made visible to the eye; and it must be obvious to every practical surgeon, that such demonstration would, in almost every instance, be impracticable, both from the minuteness of the object, the perpetual flow of blood, and the tedious dissection in the living body: so difficult, indeed, would such demonstration prove, that I doubt whether it has ever been accomplished in more than one case yet on record. But these cases, and some others which have been recorded, afford sufficient data for distinguishing

wound, of the nerves from those cases of inflamed veins, so well described by Mr. John Hunter, and from the inflammation of the surrounding cellular membrane, described by Dr. Duncan; and for establishing, as a safe rule of practice, the division or the destruction of the affected portion of the nerve, if within the reach of the knife or cautery, as soon as the nature of the injury is ascertained,—if possible, within a few days: yet not to be deterred by the lapse of any length of time from the reception of the injury, provided no constitutional disease shall contra-indicate an operation.

I will only further add, that the probability of success in such cases is infinitely greater than in those where the nerve is divided in *tic douloureux*; for we do not yet know whether the cause of this last disease resides in the extremity of the apparently affected nerve, or at some spot between the extremity and its origin in the sensorium. In the former case, we are quite certain of removing the affected portion of nerve; but, in *tic douloureux*, we can never be sure of being able to reach the part that is diseased, until the success of the operation proves that we have done so.

ART. III.—*Of the Expectoration in Phthisis.* (From the Thesis of M. ANDRAL.)*

WE think, with Aretæus, that it is by the consideration of their *physical* properties that the sputa peculiar to the tubercular degeneration of the lungs, can be best recognised.

At the commencement of phthisis, when some lesion of the pulmonary organs, more important than simple catarrh, is indicated by cough with frequent hæmoptysis, emaciation, and irregular febrile attacks, the sputa are yet without character.

In most individuals the cough is dry, while in others it is accompanied by a purely catarrhal expectoration, which, although remaining for a length of time, still preserves the character of that in acute catarrh. This circumstance is not to be overlooked, and should cause the physician to suspect the existence of tubercles. Nevertheless, after this dubious catarrh has remained for a long time, if the sputa are examined daily, small yellowish-white grains are observed in the expectorated matter, which have a tolerable consistence; and vary from the size of a pin's-head to that of a pea. They remain separate, and fall to the bottom of the vessel; when broken, they exhale a very foetid odour, which has been regarded by Baglivi as pathognomic of pulmonary consumption.

We must not confound these granular bodies with those secreted by the pharyngeal glands, which are exceedingly viscid and tenacious, presenting a strong contrast to the friable tubercular debris.†

At the same period of the disease, the sputa are sometimes composed of a transparent colourless liquid, in which are suspended long and delicate striæ; in some instances floating on the surface of an opaque

* From Dr. STOKES' *Introduction to the Use of the Stethoscope*.

† A better method of distinguishing these substances is by heating them on paper. The secretion of the tonsils and neighbouring glands is sebaceous, and therefore greases the paper. This is not the case with the tubercular matter.

mucus, from which they may be distinguished by their dull white colour.

If death takes place during the first period, the lungs are found studded with small tubercles, some of which are hard, while others are beginning to soften towards their centre. It is rare, at this period, to meet with tubercles completely softened, or excavations of any size.

We sometimes meet with patients who, having long laboured under a dry cough, with all the other symptoms indicative of the existence of crude tubercles in the lung, suddenly expectorate a large quantity of puriform sputa, coming from a tuberculous excavation, which had opened into one of the bronchial tubes. This circumstance may prove fatal; but Bonet and Laennec relate two cases where it took place, and yet the patients recovered their health.

According as the grains and delicate filaments, which we have described, become more abundant, they unite into different-sized masses, which remain suspended in the midst of a clouded serosity; these may be then called *flocculent sputa*. In other instances they appear round and thickened, remaining perfectly separate from one another; these we have called *nummular sputa*. The appearance of these sputa is regarded by Quarin as one of the most fatal symptoms. He states that he has never seen a case terminate favourably in which they were present. When examined with the naked eye, they are seen to be formed by a multitude of little points, capable of still farther subdivision. These whitish molecules are united by a semi-transparent greyish mucus, which sometimes, however, is yellow or greenish, and completely opaque; so that the expectoration has a variegated appearance. At other times the sputa are composed of long delicate striæ, sometimes twisted on themselves; and united by mucus, from which they are distinguished by their colour. But at this period the expectoration presents innumerable shades of difference, which depend, first, on the manner of communication of the bronchial tubes with the tubercular excavation; second, on the number, length, size, and mode of division of the bronchial tubes, through which the matter must pass before coming to the trachea; third, on the quantity and nature of the mucus with which it is mixed; and, fourth, on the length of time it has remained in the bronchial tubes before its expulsion.

In whatever manner these varieties are formed, we obtain a correct idea of them from the name of *compound sputa*, first given by M. Lermnier. When a patient dies who presented the above expectoration, we are sure to find the tubercles in a complete state of softening, with deep excavations already formed in the pulmonary tissue.

During the latter periods of the disease, there is secreted from the sides of the tuberculous excavations a liquid of a dirty ash-grey, sometimes reddish colour, which last tinge appears to arise from the mixture of a certain quantity of blood. This liquid, which has a great analogy to the sanious pus of old and ill-conditioned ulcers, is frequently mixed with small grains of decomposed tuberculous matter.

When the excavations are found containing the above fluid, it is generally the case that its existence was revealed by the characters of the expectoration; in which latter, this liquid occurs at first in small quantity, but, gradually increasing, at length almost entirely constitutes

it. It is then nearly a homogeneous pus, sometimes foetid, sometimes inodorous, and containing grains of softened tuberculous matter scattered through it. These latter, however, do not always occur; and we have seen cases where, although found in the excavations, they did not appear in the sputa.

In the latter periods of the disease, when the sputa do not take on the puriform aspect, but still continue divided, it frequently happens that, twenty-four or forty-eight hours before death, the character of the expectoration is altogether changed, the serosity disappears, and the sputa form a thick greyish mass, strongly adherent to the bottom of the vessel.

In other cases, expectoration is altogether suppressed a short time before death; the symptoms are then aggravated, and the strength rapidly diminishes. This sudden suppression may be justly looked upon as one of the most fatal symptoms. As in pneumonia, it may arise from two causes: first, from the inability of the patient to expectorate, the sputa collect in the larynx and trachea, and he sinks in a state of asphyxia. In the second case, the expectoration is suddenly suppressed, without any tracheal rale being heard, while at the same time the mucous rale, which indicates the existence of a cavity filled with liquid under the point where it occurs, suddenly ceases to be heard in this situation, although a short time before it had been completely evident. We must then admit that the liquid filling the cavity was rapidly absorbed.* In some cases, where the patients ceased to expectorate immediately before death, we have found vast excavations entirely empty.

The attention of physicians has been for a long time directed to the odour of phthisical sputa, which in most patients have a faint and nauseous smell. In these individuals, the disease may go through its different stages, and death supervene, without the odour of the sputa becoming more disagreeable. In other cases, the expectoration, although long inodorous, will, a few days before death, acquire an insupportable foetor, which is also perceived in the matter of the cavities.

What is the cause of this change of odour? The foetor of pus, which often arises from its contact with air, may in some cases depend on other circumstances; such as its own qualities, and the time it has remained in the cavity. The same should be true of the liquid contained in tuberculous excavations of the lung.

But observation has shown that, from whatever cause the foetor may arise, it is one of the most fatal symptoms, when occurring in a patient whose expectoration was previously inodorous.

The foetor of expectoration, at the commencement of the disease, is a far less unfavourable symptom; as patients thus affected have lived for a length of time.

The taste of the sputa, as perceived by the patient, has attracted as much attention as their odour. Most authors have advanced, that those patients whose sputa are insipid sink less rapidly into a state of maras-

* May not the phenomenon be explained, by supposing that the softened tuberculous matter has passed into and filled the smaller bronchial tubes, from whence, owing to the great debility of the patient, it could not be expectorated?

mus. But our experience does not confirm the truth of this position. We have seen many phthisical patients who complained of the insupportable taste of their expectoration, and who nevertheless sunk but slowly. Others, on the contrary, died rapidly, although their sputa were nearly insipid. We have met with few patients whose expectoration had the mild and saccharine taste described by Hippocrates as one of the symptoms of pulmonary consumption. Sputa possessed of a saline taste, have also been noticed by Hippocrates as one of the precursory signs of phthisis. Morton insists much on this symptom; but we see many patients labouring under a simple catarrh, whose sputa have a saline taste, and yet these individuals may never become phthisical; and, on the other hand, there are many consumptive patients whose sputa never have a well-marked saline taste.

It must be left to future experience to decide whether the expectoration of phthisical patients can ever be so acrid as to erode the parts with which it may come in contact.

Hitherto we have described the expectoration in phthisis as it occurs in the majority of cases. But we have seen several instances where this disease went through all its stages, where, even after death, large excavations were found in the lung, and in which, notwithstanding, the expectoration furnished no diagnostic sign whatever. In support of this singular fact, I shall quote the following cases:—

1. A young woman, labouring under violent cough and dyspnoea, remained for three weeks in the hospital, with evident pectoriloquism in the antero-superior part of the right side of the chest. Her expectoration, however, was all through purely catarrhal, and composed of a colourless, transparent, and thready mucus, adherent to the edges of the vessel by long striæ, some of which were opaque. After death, large excavations were found in the right lung, half filled with an ash-coloured liquid, through which there floated small grains of a dull white colour. Both lungs were studded with tubercles, most of which were still crude.

2. A young man, presenting every symptom of phthisis in its last degree, with pectoriloquism at the sub-spinous fossa, had habitually but a trifling expectoration, similar to that of acute catarrh arrived at its last period. It was composed of a greenish yellow, thready, homogeneous mucus, mixed with air and saliva. During the six weeks that he remained in the hospital, his expectoration was mixed with striæ, of a dirty reddish colour, which appeared to be derived from pulmonary excavations. Upon dissection, we found the right lung entirely studded with miliary tubercles, of which some were also seen in the left pulmonary organ. At the superior part of the right was a cavity capable of containing a large walnut, and completely empty.

3. Upon opening the body of a woman who had sunk under a chronic diarrhoea, we found at the superior part of both lungs several small cavities, which communicated with one another, and were filled with softened tuberculous matter. Into one of these a large bronchial tube opened. But it is extraordinary that, during this woman's stay of three weeks in the hospital, she never expectorated at all, nor complained of any morbid symptom in the side of her chest.

A young man sunk under peritonitis, which supervened on a chronic enteritis. He stated that he never coughed, and the expectoration was wanting. After death, an empty cavity, capable of containing an apple, and lined by a thin concrete purulent matter, was found at the top of the right lung. Several smaller excavations, communicating with one another, and equally empty, were found on the same side. The rest of the lung contained many crude tubercles.

In this case, did the excavations, once emptied of their tuberculous matter, cease to produce any new secretion? Was the secretion in the lung suspended by the abdominal affection?

In some instances, we have found large excavations, filled with a grey or reddish liquid, which was not observed in the sputa, although they indicated clearly the existence of phthisis.

When pneumonia supervenes on phthisis, the sputa change their character altogether, and only show acute inflammation of the lung; except in some cases, where the two expectorations are blended.

In order that we shall not be led into error by the characters in phthisical sputa, it is necessary to pay attention to the particular hour at which they are examined. Many patients have a characteristic expectoration during the night and morning only, and for the rest of the day they do not expectorate; or, if they do, their sputa are purely catarrhal. Others only expectorate at the close of the hectic exacerbations, while during the paroxysm their cough remains dry.

Tuberculous excavations are thus analogous to many external ulcers, whose surfaces become dry during the access of an intermittent, and again moist at the close of the paroxysm.

It sometimes happens that, at intervals, the sputa cease to be characteristic, without our being able to assign any cause for this change. This intermittance of expectoration, we have frequently seen to alternate with diarrhœa; when the stools became very frequent, the sputa were either less abundant, or ceased altogether. We have also seen a case of a phthisical patient, who had caries of one of the left ribs, in whom the expectoration diminished whenever the suppuration increased, and vice versâ.

Expectoration in Emphysema of the Lung.

Emphysema of the lung is generally accompanied by the symptoms of catarrh, and the expectoration is therefore very variable in its character; the cough is sometimes dry, sometimes followed by the expulsion of a greyish, transparent, and more or less viscid fluid. At other times the sputa are thick and opaque.

Expectoration in Œdema of the Lung.

In this case the expectoration, according to M. Laennec, is aqueous and transparent, like that of acute catarrh. But, as œdema of the lung is rarely a primitive disease, and may occur in many different diseases where the bronchial membrane is already affected,—such as chronic catarrh, pneumonia passing into resolution, diseases of the heart, fevers, &c.—it seems probable that the expectoration in this disease may appear under many different aspects; and such, indeed, has been the result of our experience.

CRITICAL ANALYSIS
OF
ENGLISH AND FOREIGN LITERATURE,
RELATIVE TO THE VARIOUS BRANCHES OF
Medical Science.

Quæ laudanda forent, et quæ culpanda, vicissim
Illa, prius, cretâ; mox hæc, carbone, *notamus.*—PERSIUS.

DIVISION I.

ENGLISH.

ART. I.—**Transactions of the Medical and Physical Society of Calcutta.* Vol. I.—8vo. pp. xxvi. 409. Calcutta, 1825.

THE work, of which we are now about to render an account, is one of the most curious and interesting which has fallen within our notice for some time past; inasmuch as it is the first fruits of the labours of the Medical and Physical Society of Calcutta, a society instituted in the year 1823, and composed principally of the medical officers of his Majesty's and the India Company's service, whose objects and views are developed in a very sensible Preface, to which we shall presently call the reader's attention. We cannot however forbear, previously, from expressing our honest pride and satisfaction on receiving this solid testimonial of the zeal which animates our professional brethren in the East. We trust that this is only the precursor of many successive volumes; and that the healing art, as well as all those arts and sciences which tend to adorn life, and to render it more secure and more happy, may extend their influence, and finally overspread all those vast territories which have fallen under the government or protection of this country.

The volume before us contains thirty-three papers, on subjects chiefly medical and surgical, together with several shorter communications in the shape of an Appendix; with a list of the members of the Society, and an account of the donations towards the formation of a library and museum. It is illustrated with a few lithographic plates, and is printed in a very creditable manner, although the paper is but of an indifferent quality; which objection, however, applies to most that is manufactured in that country. This is, however, a very trifling matter. We might, with more reason, object to some few errors of composition, which we trace even in the Preface itself, and cannot but

* Although this work was published at Calcutta, we cannot well regard it as belonging to foreign literature, as all the contributors are of our own country: on this account, we have placed it among our English Reviews.

regret that the editors have not thought it necessary to explain the meaning of many of the Indian terms, with which European readers cannot be expected to be acquainted. Having mentioned these slight imperfections, we do not mean to insist upon them strongly, but proceed to lay before our readers an account of the origin of the Society, as detailed in the Preface to which we have before alluded: and we are the more disposed to enter thus abruptly into the subject, since the writer has anticipated almost all that we felt inclined to say relative to the utility of such associations:—

“The experience of modern times has established the advantage of miscellaneous collections, in which the unconnected observations of different individuals are brought together and preserved; and the periodical publications, which form so prominent a feature in the literature of the age, supply valuable materials to permanent compilation, and foster and keep alive the spirit of research.

“The benefits of occasional publication are in no case more evident than in the science of medicine. Amidst the varied opportunities of observation which its unbounded sphere of action develops, many circumstances of a peculiar character, many conclusions of wide applicability, must occur to its individual practitioners. The experience of its professors is the common property of the profession; but incidental reflection may be too brief for formal record,—a solitary fact too unsafe a base for generalisation; and neither the one nor the other would, therefore, be communicated to the world, unless there existed some unpretending repository, in which they might be registered for further verification or correction. Periodical publications are to us what the tables in the temple of *Æsculapius* were to his ministers, with all the advantages derivable from the improved nature of the medium, and the more justly grounded doctrines of modern practice.

“If these obvious advantages have led to the multiplication of medical journals in Europe, they constitute motives equally powerful for the introduction of similar publications in Asia; but there are various considerations calculated to enhance their utility in this country, arising from local peculiarities, and the circumstances under which the professors of medicine are here placed.” (P. i. ii.)

Among these circumstances, the influence of climate, food, &c. upon disease is noticed, as well as the advantage to be derived from the introduction of new medicinal agents; among which the pomegranate bark, the madar bark, and the croton oil, are particularly mentioned.

The following passage is so just and so candid, that we cannot forbear to quote it, since it may serve as a reply to those who may be inclined to think that this volume contains less of novelty than might have been expected.

“Whatever advantages may be realised from inquiries thus favourably instituted, will be shared by us with our brethren of the West; but some benefits may be expected from an improved circulation of useful

information amongst ourselves, which may be regarded as exclusively our own. The situation of medical men in India labours under many discouraging peculiarities: with the exception of the few among them who are resident at the principal cities and civil stations, they are scattered far apart from each other, over a vast extent of country; they hear and see nothing of the stir of science, and catch but indistinct and partial glimpses of the advancement of knowledge. Their limited means and frequent removals put it out of their power to provide themselves with regular and expensive supplies of books, and there are no public libraries beyond the limits of the Presidencies: they can derive, therefore, little benefit from the recorded experience of others; and have rarely an opportunity of confirming or correcting their own by that of an associate, a rival, or a friend. Their scene of action is too restricted, and too entirely their own, to admit of emulation or ambition; and the official Reports, in which alone their practice is commemorated, are too much matters of form and routine, to merit or attract animadversion. So situated, it is not wonderful that their zeal dies within them: no man is independent of external stimulus, and the surest method of annihilating energy is to leave it to prey upon itself.

“Considerations of this tenor, affecting the prosperity and credit of the profession in India, rather than aspiring to a competition with its distinguished and veteran combinations in Europe, led to the formation of the Medical and Physical Society of Calcutta. Publication was only a possible contingency: the immediate object was to give a concentric impulse to the detached members of the service, and to afford them augmented facility of information, as well as a new excitement to emulative exertion. They were therefore invited to contribute, without restraint, the results of their inquiries and observations to the associated members resident in Calcutta; and the proceedings of the meetings at the Presidency were, in return, to be regularly communicated to the non-resident members; the liberality of the government of Bengal enabling the Society, in its infancy, to maintain these communications, by exempting them from postage for the first year after its institution. The result of the appeal fully justified expectation, and demonstrated that means only were wanting to animate the energies of the service. A very considerable portion of the establishment of Bengal, and several members of that of Bombay, were speedily enrolled in the lists of the Society, including the Medical Boards of both Presidencies. The Society has also received proofs of a friendly interest taken in its proceedings by the Medical Board and service of Madras, although it hitherto enumerates but few of the members of that branch of the establishment. The general support, however, it has received, would have justified the Society in assuming the denomination of the Medical Society of India, had not an appellation been previously adopted, with reference to the immediate seat of its institution.” (P. v.—vii.)

“In conclusion, the Society feel confident that the volume will be received with the candid judgment of medical men, and will be recognised as an unequivocal testimony of undiminished interest in the credit and duties of the profession.” We, in our

turn, feel confident that these expectations will not be disappointed; and we cannot but take this opportunity of noticing, with an exultation derived from an ardent attachment to our profession, the enthusiasm which appears to animate all its professors, even under the most discouraging circumstances; an enthusiasm arising, we firmly believe, from the purest and most honourable motives. This we conceive more particularly applies to those medical men engaged in the different departments of the public service, who in general have little else to hope for, from the exercise of their profession, than the consciousness of having performed a most sacred duty, and of having contributed their best endeavours towards the relief of suffering humanity.

1. The first paper in the volume is an account of the *Kushta*, or *Leprosy*, as known to the *Hindus*, by H. H. WILSON, Esq. —Mr. Wilson appears to have paid much attention to the medical literature of the *Hindus*, of which he promises to give a comprehensive sketch at a subsequent period. His object, in the above Memoir, is to point out the principal Indian writers on Leprosy, with their opinions as to the causes, seat, and nature of the disease, as well as its mode of treatment. We shall not enter into this inquiry, since it does not appear to us that any practical advantages are to be derived from the minute distinctions entered into by these writers, who enumerate eighteen different kinds of leprosy, seven great or principal, and eleven of minor importance. They also tell us that the disease affects the seven essential parts of the body, besides the three humours, wind, phlegm, and bile; the seven essential parts of the body being lymph, blood, flesh, adeps, bone, marrow, and semen. Neither can it be of much advantage to detail the various external applications recommended by them as remedies, considering that they are composed of the most heterogeneous and multifarious ingredients, some of them containing more than thirty articles, and in that respect resembling those costly compounds formerly so much in vogue in Europe. The belief of the contagious properties and hereditary transmission of the disease, seems to be universal among the native practitioners.

Mr. Wilson devotes a page or two in combatting the arrangement of this disease, as usually met with in English writers, and especially in Dr. GOOD's classification; and we are inclined to think that there is some justice in the objections which he has urged upon this point.

2. Of the second paper we shall do little more than give the title. It does not appear, from the account of the author, that the tree has ever been employed in medicine, and it is only proposed to be tried as a substitute for the American sassafras

bark. It is a *description of the Tree which produces the Nipal Camphor Wood and Sassafras Bark*; by N. WALLICH, M. and Phil. D. It is a species of *Laurus*, differing both from the *L. camphorifera* of Kæmpfer, from the *L. sassafras* of North America, and the *L. parthenoxylon*, of which an account was published in the *Malayan Miscellanies*, and which is described by ROXBURGH in his manuscript *Flora Indica*, by the name of *Laura porrecta*. It appears that the species described by Dr. Wallich grows but sparingly in the mountains of Nipaul, at an elevation of between six and eight thousand feet above the level of the sea.

3. *Case of fatal Effects of the Bite of a Venomous Snake.* By P. BRETON, Esq.

4. *Case of Recovery from a Wound in the Stomach, inflicted by a Pistol-ball.* By P. BRETON, Esq.

This case being extraordinary, and in our estimation any thing but convincing, we give it, without abridgment, in the author's own words, that our readers may form their own judgment.

"A trooper of the irregular cavalry, attached to the Ramghur corps, in a fit of despondency, and to avenge himself of the Risalehdar, by whom he had been reproved for negligence of duty, formed the resolution, on the 30th of April, 1819, to commit suicide.

"In the evening, about dusk, he took his holster pistol and three ball cartilages, and proceeded from the fort of Sembhelpur to the bed of the Mahánadi River, where he intended to effect his purpose. His woman, seeing him in a disturbed state of mind, followed him at a short distance. Observing him load his pistol, and directing it towards himself, she ran and seized his arm, and endeavoured to force the pistol from his hand. In the struggle, the pistol was fired, and the ball passed through the body of the woman, and killed her on the spot. The trooper again loaded, and shot himself in the pit of the stomach, the ball lodging in the left side of the lumbar vertebræ.

"Having failed in his attempt to destroy himself, and the third ball cartilage with which he had provided himself being lost when he fell on the ground, by the shock from the ball, he returned, without any assistance, to the fort, and communicated every thing that had happened. The corpse of the poor woman was immediately sent for, and brought to me, together with the trooper who had caused her death.

"On examining his wound, I found that the ball had entered the epigastric region, and was perceptible to the feel in the left side of the loins. I immediately extracted it, and closed the incision with adhesive plaster. Conceiving that the stomach was penetrated by the ball, I considered the case a hopeless one, and reported the wound to be mortal. The following morning, the man had recovered his senses, so as to give a distinct and rational account of all the circumstances which led to the commission of the rash act; and the wound manifested

such appearances as left no doubt in my mind of the stomach being perforated.

"My attention was, therefore, directed to uniting the anterior wound with all possible speed, and to prevent the introduction into the stomach of any more food than was absolutely necessary to support life. To my astonishment, the wound quickly united, and the serous discharge from the stomach gradually ceased. When union had taken place in the anterior wound, I was informed by the native doctor that, when food was taken into the stomach, particles now and then escaped from the wound in the loins, where the ball lodged. To convince myself of the truth of this assertion, I gave the trooper a draught of water to drink; and, almost immediately afterwards, I distinctly saw a small quantity of it trickle through the wound. I repeated this two or three times, and was satisfied that there was a communication between the stomach and the wound in the loins. Superficial dressings were continued, and rigid abstinence enjoined. In the course of about a month and a half, the wounds healed, and the man recovered, and was afterwards tried by a general court-martial for the crime of murder.

"It is remarkable that, in this case of perforation of the stomach by a pistol-ball, very little pain and uneasiness were expressed by the patient, and symptoms of irritation were not at any period manifested. Neither was thirst complained of, nor were the natural functions of the body in any considerable degree disturbed.

"Mr. G. King, surgeon of the 4th native regiment, who was at Sembhampur at the time of the occurrence of the event, and was present when the trooper was first brought to me, can bear testimony to the nature of the wound, of which the above is a description." (P. 59—61.)

5. *On the Exhibition of Phosphorus in Cholera Morbus.* By
JOHN ADAM, M.D.

This paper is ushered in with the following remarks:—

"In an abstract of cases treated in the general hospital, which I had the honour to present to the Society at our last meeting, I described the epidemic cholera as assuming a severe form, and proving extremely fatal among a detachment of H. C.'s recruits recently arrived from England. The total inefficacy of the means employed in those cases, induced me to propose some remedies of a powerfully stimulating nature, whose application may be considered in a manner new to British practice. Phosphorus, to which I more particularly alluded, has not a place in any of our Dispensatories, and the trials which have been made with it, as far as I am acquainted, are confined to the physicians of the continent, especially of Germany and Poland. From the accounts which some of these have furnished of its effects in disease, it appears to be a very powerful medical agent; but the supposed poisonous qualities of the drug, and its singular susceptibility of combustion, have combined to prevent its more extended use; and the most tragical consequences seem to have been apprehended, both by patient and practitioner, from the presence of even a minute quantity in the stomach. How far, on the one hand, such fears may be well grounded, or, on

the other, the medical virtues it is declared to possess, be not hastily assumed, from a limited and partial observation of its effects, I am not prepared to determine. All the information which I have been able to procure on the subject, is contained in Hooper's Medical Dictionary, under the article Phosphorus; and, from a perusal of the statement there given, I was satisfied that it was deserving of a trial in cholera morbus, and I resolved on administering it in the first case which occurred. Before detailing the results of my own experience with this remedy, I shall here make a few extracts from the above work, in order to show the condition in which the patients are represented to have been at the period of its exhibition, and the encouragement thereby held out for extending its use, by analogy, to cholera." (P. 62, 63.)

These extracts we omit, and proceed to the history of some cases in which the phosphorus was employed by our author: they are three in number, all Europeans, stout young men, belonging to the 13th regiment. We shall detail the first of these cases in Dr. Adam's own words:—

"Michael Woden, H. M.'s 13th Light Infantry Regiment, twenty-three years of age, an uncommonly stout muscular man, was admitted on the 24th May, about half-past four A.M., in the second stage of cholera morbus; and had one scruple of calomel, with two grains of opium, which were speedily rejected. At the morning visit at six o'clock, he was in a state of great exhaustion. Aspect livid and languid; pulse barely perceptible; skin not so moist as usual; cramps in both extremities; two or three stools since taking the medicine, of the peculiar white watery kind characteristic of cholera. Two grains of opium and ten of camphor were administered, with an enema of two drachms of tincture of opium. In the course of the day, no improvement taking place, phosphorus was given in the dose of two grains, repeated. It was taken in the solid form, rolled up in small portions of soft bread. No particular effect was observed at the time of swallowing it, but it was retained on the stomach. At the evening visit, the pulse was quite gone, skin cold, and he lay in a sort of stupor, as if asleep, or in articulo mortis. Three grains of phosphorus were then ordered, with bottles of warm water to the feet and legs, and a mustard cataplasm to the stomach. At nine P.M. he looked rather better, but otherwise the symptoms were not more favourable; the whole surface cold and covered with moisture, and thirst extreme. The phosphorus was repeated, in the dose of three grains. On the 25th, next morning, he was not only improved in his looks, but appeared altogether better than was anticipated. Face and hands still livid and cold; pulse perceptible, but excessively feeble; tongue white; had no complaint of pain, but was drowsy, as if under the influence of the opiates. The phosphorus was prescribed in the dose of two grains, and ordered to be given again at ten o'clock, in the dose of one and a half grain, in small divided pieces, unless the surface previously became warm. No relief ensued, and he died at one P.M.

"*Appearances on dissection of the body.*—The post-mortem examination was made principally with a view of ascertaining the effects of

phosphorus on the stomach and intestines. The remedy had been exhibited at first in one piece, rolled up in soft bread slightly moistened, so as to form a sort of paste enveloping the phosphorus; but latterly it was given in divided fragments, also rolled up in bread, but so slightly coherent as to yield readily to the action of the stomach, and allow the phosphorus to come into apposition with its internal coat. The intestines externally presented a reddish appearance, as if slightly inflamed, and there was some congestion in the veins of the stomach. On laying open the stomach, a dark reddish colour was observed towards the cardiac orifice, and a greater portion of mucus was effused than is commonly met with in cases of the disease. A large piece of phosphorus, completely enveloped in the bread used as its vehicle, was found near the pylorus, lying in the form of a ball. Beyond this, the internal coat of the intestines was covered with a mucous or puriform effusion, resembling the matter of gonorrhœa or tragacanth paste, and inflamed, as is observed in those who die in the advanced stage of cholera. The other viscera appeared sound." (P. 65—67.)

From these histories, and the accompanying dissections, we learn only that phosphorus does not produce any deleterious effect on the system, when taken in pretty large doses; for we cannot allow ourselves to believe that any advantage was derived from its exhibition; and therefore the cases related by our author only go to prove the safety and practicability of submitting the powers of the remedy to the test of further experience. To those who are inclined to make trial of its efficacy, the following observations will be valuable:—

"With regard to the form of administering phosphorus, that of solution in ether, occasionally adopted by the German physicians quoted above, appears the preferable mode. The stimulating properties of the menstruum will tend to aid its operation; while the fluid, by being diffused over a larger portion of the stomach, will prove the more efficient. When I ventured on prescribing this remedy in cholera, I wished to make trial of the solution, but could not obtain at the time an ether sufficiently concentrated to prepare it. I have not since repeated the experiment; although, with the assistance of heat, there can be no difficulty, I apprehend, in accomplishing this object. The solution in expressed oil does not appear well adapted to the purpose in view; but it may be deserving of inquiry whether the volatile oils, as turpentine, would not furnish even a more convenient and efficacious vehicle than the ethers.

"Before concluding these remarks, I must observe, that the exhibition of phosphorus is admissible only in the second stage of cholera, or during that period of exhaustion and collapse which succeeds the first attack. At the very commencement of the disorder, when much gastric irritation prevails, and in the last or febrile stage, direct stimulation, as a general plan, is obviously contra-indicated. Still, in the occasional sinkings which occur after the operation of purgatives, even in this stage, the phosphoric solution might be used with advantage, if greatly

diluted. It is not easy, however, to lay down fixed rules for the treatment of this disorder. The varying character it displays in its progress requires a corresponding variation in the remedies employed, and the utmost vigilance to be exercised on the part of the practitioner, in order that he may meet the symptoms as they arise. It is to be lamented, indeed, that all the skill and care he can bestow will prove too often unavailing. The disorder, in the majority of instances, continues to hold on its course unchanged; and, though protracted for a longer or shorter time, ultimately bears its victim to the grave, in defiance of every remedy that reason and experience combined can suggest." (P. 72, 73.)

6. *Notice on Oil in the Blood.* By JOHN ADAM, M.D.

7. *On the Madár, and its Medical Uses.* By G. PLAYFAIR, Esq.

The author presents us, in this paper, with a botanical description of the plant in question, the method of preparing the root for internal administration, and then enumerates the diseases in which it has been found efficacious; concluding with extracts and copies of correspondence with gentlemen of the profession, in corroboration of the beneficial effects said to result from the use of the *madár* as a medicine.

Mr. Playfair gives the following account of the reasons that first induced him to make trial of the *madár* root:—

"In the year 1811, I was a good deal engaged in an investigation, the object of which was to ascertain the medical properties of plants used by the native physicians; and amongst others I met with the *madár*, as one item in a recipe for the cure of 'Jezam.' The proportion was very small, and the ingredients of the formula numerous; but, as the use of it was evidently attended with some benefit, I determined to institute an inquiry into the virtues of each article separately; but I was under the necessity of proceeding with great caution, as, in every other work which I consulted, the *madár*, or *aak*, was mentioned as an active poison. Having discovered its effects in the above-mentioned complaint, and reasoning from analogy, I proceeded to try its effects in other diseases.

"After mature consideration and conviction of the efficacy of this powerful agent, I communicated the discovery to several gentlemen high in the profession, who assisted me in extending the scale of my experiments. In 1814, I addressed the Medical Board on the subject, and solicited that the discovery might be honoured with their patronage.

"In addressing the Medical Board, my object, of course, was that, by their sanction and influence, a much more extended trial might be made than could be effected by the exertions of an individual; and I expressed a hope that they would be induced to sanction its use in some of the hospitals, where a greater variety of diseases were to be met with than could be expected in my limited practice. At the request of the Board, I forwarded a quantity of the medicine properly prepared, of which they were pleased to order a trial to be made in the general hos-

pital at Calcutta. In August, 1814, I was informed by the Medical Board that the trial had been made, and that, as far as the experiments had then been carried, they were considered encouraging to a further perseverance. I was desired to send a further supply of the medicine, as the quantity I had forwarded had been too small to produce any decisive result. This, of course, was complied with immediately; and in March, 1815, I was honoured by receiving copies of a letter and report, which had been given in by the surgeon of the general hospital. The Medical Board concluded, that, although the experiments were not very favourable to the opinion that the madár was possessed of extraordinary medical virtues, yet they observed, no ground was afforded for any very positive inference on the subject; and, as the trials had been confined to one disease only, the efficacy of the medicine still remained to be ascertained by more diversified experiments in a variety of other affections." (P. 78, 79.)

It appears, however, that it had only been employed in syphilis, and that in a very limited number of cases; the doses, also, had not been properly regulated, and therefore the results were not so favourable as might have been expected. This led to further explanations with the Medical Board, but it does not appear that any fresh evidence, as to the efficacy of the madár, emanated from that quarter.

Some experiments made in the native hospital at Benares were extremely favourable, as well as in several European hospitals, as will presently appear. The author adds, that, since the year 1811, he has administered it to a variety of patients, with the happiest results; and every year's experience has added fresh conviction to his mind of the intrinsic value of the medicine.

The madár root is said to be a powerful tonic and alterative, stimulant and deobstruent, and in combination with opium it is sudorific. The complaints in which it has been given are syphilis, lepra, and other cutaneous eruptions; dropsy, rheumatism, glandular obstructions, tape-worm, and intermittents. It has been found efficacious also in the lupus, which is very common among the natives of India.

The cases in which the curative powers of the madár have been most strikingly exemplified, next follow. The first case is one of a severe herpetic affection in a native, cured by the madár root, in doses of five grains twice a-day. The next is related by one of our author's correspondents: it is a case of leprosy, which had existed five months, and had resisted every remedy previously employed. It was given in the quantity of three grains three times a-day, and gradually increased. In about six or eight days, the complaint was evidently on the decline; in about fourteen, not above one half of the original diseased surface remained, and the itching and pain were en-

tirely gone. The complaint was, after about six weeks, quite removed, the skin smooth and level. The patient never complained of any uneasiness, although latterly he had taken to the extent of thirty grains daily. The same correspondent relates two other histories, one of remittent fever in a child, the other of pulmonary complaint in an adult, where this medicine was eminently successful. It was also used as an external application in ill-conditioned sores, with the happiest effect.

Other professional gentlemen testify very strongly also in favour of this new remedy, chiefly in leprosy, syphilis, and tape-worm.

Our author sums up the general results of his communications and experiments in the following words:—

“It will be observed, that I have allowed the merits of this medicine to rest almost entirely on the evidence of members of the profession, whose opinions must be considered of much more value than my own, and less liable to the imputation of partiality, or generalising too fondly from what might have been considered doubtful premises. I shall, therefore, conclude with the fervent hope that the *madár* will continue to attract the attention of the profession, and by offering my sincere thanks to those gentlemen who have so essentially contributed to enable me to lay it before the public in its present state.” (P. 102.)

The two next papers we pass over entirely. The first relates to *the appearance of Locusts in the Doab*, by G. PLAYFAIR, Esq.; and the second to a *Luminous appearance of the Ocean*, by J. HENDERSON, Esq. They are not without their interest to the naturalist and man of science; but our object is more especially the description of professional subjects, and we have still a large portion of the volume to examine.

We pass on, therefore, to the tenth article, which is a *Case of Fungoid Disease*, by R. N. BURNARD. The patient was a Bungalee, aged thirty-three; the disease was situated in the knee, and had existed for a twelvemonth. The tumor was large, and ulcerated to some extent; the ligamentum patellæ was absorbed, the muscles of the thigh wasted, and the whole body extremely emaciated. There was hectic fever present, though neither much cough nor expectoration. As, however, the absorbent glands were not enlarged, and there did not appear the least vestige of a similar disease in any other part, amputation was proposed and performed. This man recovered perfectly from the operation, though whether his recovery will be permanent or not remains yet to be seen. From this case Mr. Burnard draws the following conclusions:—

“1st. That a malignant disease may in some instances remain for a long time local, and exhaust the system simply by irritation. 2dly. That malignant diseases do not always extend by absorption, as in this

case there was no affection of any part of the absorbent system. 3dly. That, where the disease is confined to one part, and there is no evidence of similar disease in the viscera or in the absorbent system, no state of emaciation or debility ought to prevent the removal of the part by operation, if practicable.

"It should have been noticed, that, previously to the operation, the colour of several parts of this man's body was nearly removed, and his face, hands, and feet, instead of the natural olive colour, were almost white; but, as he regained strength, the natural colour returned, and they are now uniform." (P. 115, 116.)

Article 13th is an *Essay on Delirium Tremens*, by G. PLAYFAIR, Esq. We should not, perhaps, have been induced to notice this paper, excepting that it confirms the line of practice adopted in Europe for the cure of this complaint, and contains a very satisfactory account of the disease, its causes, and method of treatment.

14. *On Strychnos Nux Vomica.* By T. E. BAKER, Esq.

This gentleman was induced to direct his inquiries into the effects of the above medicine, in consequence of an accident which happened to a servant at the Honourable Company's stud depôt.

"A man, named Ram Serdek, was carrying an umbrella for Lieut. Hailes, an officer of the stud, when he suddenly fell down in a fit: he appeared stiff and lifeless, and, when raised up, stood upon his heels, with the toes and feet turned upwards; the eyes remained open, but fixed; and the jaws were so firmly closed, that it was some time before they could be separated, in order to pour down some spirits of hartshorn and water. He recovered in the course of a few minutes, and soon after vomited.

"When I saw the man, he was perfectly recovered, except from the effect of the bruises which he had received in his fall. On inquiring into the cause of the fit, he said it was owing to his having taken the *kuchila* (nux vomica) that morning, and not having eaten any thing before or afterwards, having merely drank a little milk. He took the medicine at seven o'clock, and had the fit two hours after: he had been taking it regularly for four months. He began with the eighth of a nut, the usual dose, which was always taken morning and evening, immediately after eating his meals: the quantity was gradually increased, and, for the last month, he had taken a whole nut morning and evening, which quantity must never be exceeded. A nut weighs about twenty grains." (P. 138, 139.)

The nux vomica is also used by the natives as a preventive of hydrophobia. When a person is bitten by a dog supposed to be rabid, they give one-eighth of a nut, morning and evening, for seventy-one days; and a nut, roasted and mixed with linseed oil, is applied to the bitten parts. A native doctor told the

author that twelve people, bitten by mad dogs, all escaped the disease by using this remedy. We are also told that, when hydrophobia has taken place, it is sometimes used with success.

The only other complaints for which the *nux vomica* is used are those anasarcaous swellings of the lower extremities which so frequently occur after fever. It is always given either immediately before or after meals, otherwise it is apt to produce giddiness.

Articles 17th, 18th, and 19th, are papers on the *Dracunculus*, by J. BIRD, Esq. by Dr. KENNEDY, and by G. SMYTTAN, M.D. Though occupying a considerable number of pages, these observations contain but little of novelty, either as to the description of the worm, the causes of its invasion, or the method of cure. They principally go to confirm what has been previously said upon the subject by Mr. PATON, Mr. SCOTT, and Dr. CHISHOLM.

Want of space obliges us to pass over several articles, some of great local interest, no doubt, and others very excellent examples of the diseases of which they treat.

The next paper which arrests our attention is the *Case of a singular Tumor in a Native*, by J. ADAM, M.D.

"The size and singular form of the tumor, together with the appearance of his body generally, studded over with small berry-like elevations, immediately attracted my attention; and I was glad to avail myself of the opportunity of becoming acquainted with a variety of cutaneous disease which seemed in a great measure new, and whose investigation, I conceived, might be interesting to the Society and the profession at large. From some resemblance which the parts bore to the diseased surface in elephantiasis, the effect produced on the eye of the beholder was far from agreeable. A dark wrinkled mass, in colour and texture not unlike the skin of a toad's back, hung down over the neck, in longitudinal folds, extending from above the right ear to the middle of the pectoral muscle. It was attached, at the upper extremity, to the loose scalp surrounding the ear, and was there comparatively narrow; but, as the tumor descended, its base embraced a wider range, and included, towards the chin, the greater portion of the integuments covering the superior and lateral aspect of the neck. At the angle of the jaw, it appeared also to penetrate more deeply, and to be not wholly unconnected with the blood-vessels and nerves lying in that situation. When held up, outstretched, it was seen to be divided by an irregular perpendicular line, with lateral ramifications, into two unequal portions; the largest being situated beyond the ear, and the smaller forming the termination at the chin. In this position it measured rather more than one foot in its longest diameter, and eleven inches in its shortest. Its thickness at the lowest part might have been about three inches; but higher up, towards the ear, it did not exceed one and a half. To the feel it was doughy

and inelastic, and was not endued with any great degree of sensibility; for, when pinched rather freely, no uneasiness whatever was produced, except at particular spots, which were indurated, and evidently proceeded from absorbent glands involved in the general mass. In the portion of the tumor situated next the chin, one of these had attained the size of a duck's egg, and was exquisitely tender to the touch; but in the other parts he could bear the roughest handling without complaint. There were several small tumors in the sound scalp behind the large mass, which appeared to partake of the same glandular character as the one alluded to, and differed in many respects from the tubercles dispersed over the surface. This difference was indicated both by the greater hardness and sensibility of the former, previous to the removal of the tumor from the neck, and the enlargement and inflammatory action which they underwent subsequently to it. All over the surface, the skin was elevated into globular tubercles, which were small on the face and forehead, but increased in size on the trunk and lower extremities. The largest of these was situated a little above the right nipple, or midway between it and the axilla, and did not exceed an ordinary walnut. There were several large ones also on the back and lower extremities; but, on the arms and hands, they were not only smaller, but less numerous and distinct. All of these, with exception of the large mass in the neck, were disposed to be sessile, and were attached to the skin by a base occupying, in general, about a third of the sphere which they represented. When grasped between the fingers and thumb, they were found not so soft and yielding as might have been expected; and it seemed that, while the skin itself had lost its elasticity, some change had been effected in the texture immediately underneath, by which this quality was increased in it, and a power of resistance added that did not belong to the natural and healthy condition of the parts. In the interstices of the tubercles, no apparent alteration had taken place in the skin, which was, in point of colour, not darker than is usually observed among the lower order of natives. The large tumor alone, as mentioned above, was deeper in its shade than any other part of the exposed surface." (P. 299—302.)

The man was muscular, and generally healthy; his chief annoyance was the weight of the tumor, and a pricking and tingling sensation in it. He appeared about twenty-two or twenty-three years of age, and the tumor had existed about half that period. This man was very desirous that something should be done for the removal of the tumor; but, as the affection appeared not to be local, as far as regarded the cuticular texture, the author thought it could not be successfully attacked but through the medium of the system. With this view, the liquor arsenicalis was prescribed. After two or three weeks, the tumor became painful, and the tingling sensation was increased; febrile irritation also came on, and the arsenic was consequently omitted. When the feverish symptoms had subsided, it did not appear that any alteration had been produced in the tumor, and he became more solicitous than ever that the

diseased mass should be cut off. In compliance, therefore, with his wishes, this was done.

“ With the assistance of my friends, Mr. Hamilton and Dr. Mouat, of H. M.’s 13th Light Infantry, (who both took a particular interest in the case,) I removed the larger portion of the tumor by a simple incision in the course of the apparent line, commencing a little above the ear, and terminating at the most depending part, where it rested in contact with the breast. Contrary to expectation, the hemorrhage was profuse, and we found it necessary to secure five or six pretty large vessels before applying the dressings. A few stitches were used to bring the retracted edges together, and adhesive straps, with the usual pledget, placed over all. Suppuration took place in the most kindly manner in the whole line of the wound, and after five or six weeks the sore was completely cicatrised. A considerable portion of the tumor next the chin still remained adherent by its base, but was productive of no inconvenience; and the patient repeatedly declared the relief he experienced from the operation. Had the removal of the whole tumor been determined on, it must have proved a work of some difficulty, and not altogether exempt from danger, as its connexions at the angle of the jaw were pretty deeply seated; and the attachment to the neck was so extensive, that a large wound must have been the result, with such subsequent irritation as would have proved injurious to the object in view. The excised portion weighed between two and three pounds: it was composed of elongated skin and condensed cellular membrane, but so altered in structure as to be scarcely recognisable. Diseased absorbent vessels appeared to be mixed with the hardened adipose substance, and the whole resembled not a little the thickened state of the integuments so frequently met with around the knee-joint, in cases of white swelling.

“ After the wound was closed, I wished to try the effects of iodine, whose powers in removing various tubercular affections have been so highly extolled of late; and I began by administering the tincture in the dose recommended. But my patient, having now attained the object which brought him to the Presidency, was desirous of returning to his home. He ceased his attendance for a day or two; and, on inquiry being made, it was found that he had departed for the country, without giving the slightest intimation; and I heard no more of him afterwards.” (P. 305—307.)

The two last Essays contained in the volume relate to the *Worm found in the Eye of the Horse*; the first is by P. BRETON, Esq., the second by W. TWINING, Esq. The first paper commences thus:—

“ At the last meeting of the Medical Society, I was desirous to bear testimony to the fact asserted by a member present, of the existence of the disease termed ‘worm in the eye of horses,’ but was restrained by a wish to hear the sentiments of the other members, better informed than myself on this singular malady.

“ If an opinion can be formed from the silence of the members who

were present when the appeal was made to the Society for corroboration of the fact stated, the existence of the malady was not generally believed. The removal, however, of all doubt of the presence of the worm in the eye of horses from actual demonstration, enables me to write with confidence in confirmation of the assertion.

"Several instances of the case have fallen under my own observation, and in more than one instance success attended me in the operation of extraction. The worm which I had an opportunity of examining, and preserving some time in spirit of wine, resembled very much the appearance of a piece of very narrow tape. It was upwards of an inch in length, was soft in texture, and it died in a few seconds after its extraction. Whilst swimming in the aqueous humour of the anterior chamber of the eye, it appeared of a white colour and flat, and its motion was precisely that of a leech in water. Its motion appeared to me to be incessant. I watched its action upwards of an hour, without observing the slightest diminution of it; and the natives seem to think that it does not fasten and rest itself as a leech does in a bottle of water, but continues in constant motion. This, however, I conceive to be mere hypothesis; for their observations, in general, on subtle points are not such as to warrant belief in the accuracy of their opinions.

"The motion of the worm in the aqueous humor seems by degrees to excite a slight irritation. The aqueous humour gradually assumes a milky appearance, slight inflammation of the tunica conjunctiva ensues, and water begins to trickle from the eye. If the worm remain, inflammation of the iris arises, the aqueous humour becomes turbid, and the coagulable lymph of the blood begins to manifest itself within the laminae of the transparent cornea. This affection continues till the opacity of the cornea is completed. The inflammation then seems gradually to subside; but whether from the death of the worm at this stage of the disease, I had no opportunity of ascertaining." (P. 337, 338.)

Privation of sight is the invariable concomitant of this worm, if not removed in time; and extraction by incision into the cornea is the only effectual remedy. Horses troubled with a worm in the eye are also subject to weakness in the loins: this is the universal belief of the natives, and receives confirmation from the following remarks of Mr. GRELIES, veterinary surgeon of H. M.'s 25th Light Dragoons.

"This wonderful phenomenon, or production in the animal economy of the horse, I will not presume to explain; for I have witnessed but one case, which was on my first arrival, and being under some fear, from the very ferocious description I had received of the animal, I would not venture to operate, unless he was previously thrown; in consequence of which I was not successful, although I made two very extensive incisions immediately over the worm, as he moved on the surface; but, from the position of the horse's head on the ground, I ought to have foreseen the impossibility of the worm's escaping with the watery humour, which is the object of incision; for, when the head is confined to the ground, the water naturally gravitates to the posterior chamber of the eye, consequently neither water nor worm can escape by incising in that

posture. It will be needless to add, that the successful mode of operation is to insert the lancet while the horse is standing: if possible, the incision should be made while the worm is floating on the surface of the eye, and a little beneath it, by which it will immediately pass out with the water. Some care is required not to make the incision too extensive, as the crystalline lens may also escape, which would cause immediate blindness.

"I have heard that mercurial applications to the eye will destroy the worm, which being absorbed, the vision will not be impaired. However extraordinary this mode of cure may appear, it is not so much so as the disease; and I conceive it worthy a trial, as the texture of the eye would not be so much deranged as by incising.

"I have been informed by many gentlemen, that weakness in the loins frequently succeeds the extraction of the worm, which I believe; but I very much doubt whether the one is in consequence of the other. It is possible that a relaxation of the nervous system may, however remotely, cause the worm in the eye, as it is a disease confined to hot climates; and, as I firmly believe the weakness in the loins to be some paralytic affection of the spinal marrow or nerves, so I imagine it very probable that a horse, having had a worm in the eye from a relaxed system, will also be very subject to weakness in the loins. This does not argue any particular connexion between these complaints, or that one is in consequence of the other; it only advances that the same habitual or remote cause may produce both. This is, however, entirely hypothesis, which I have presumed to venture, and which, at all events, I conceive much more probable than that extracting the worm from the eye occasions a weakness in the loins." (P. 340, 341.)

Such being the facts of the case, the author endeavours to explain them by the following hypothesis:—It being admitted that the *Strongylus armatus* and *Filiaris papillosa*, frequently observed in the eye of the horse, exist also in the cellular tissue of that animal, especially in the neighbourhood of the lumbar vertebræ, as well as being found in the blood, it is not improbable that, in the course of the circulation, they may attach themselves and multiply in the lumbar region, constituting the principal disease; and that the worm in the eye is casually deposited in the anterior chamber, by means of the circulation of the blood through the large arteries of the ciliary processes. The worm in the eye may be, therefore, only the index of the disease in the lumbar region. Both these worms may often exist in the cellular tissue of the horse, without a single one appearing in the eye; and it may happen that the worm in the eye may be manifested immediately after the generation of the animalculæ in the lumbar region, and before the health of the animal has begun to suffer. It by no means follows, when these worms exist in the loins, that a worm in the eye must necessarily be met with.

It is proper to observe, that this explanation of the inva-

sion of the disease in the horse, is really belonging to Mr. Twining, the author of the second paper, and that Mr. Breton only adopted these suggestions in consequence of reading that paper. In other respects, Mr. Twining's Essay confirms the facts and statements in the first paper.

In concluding our notice of this volume, we must apologise for omitting to mention several of the communications; but we have been chiefly induced to select those subjects, either of the most general interest or which are least known in this country; and, above all, we have been careful to abstain from making remarks of our own, both because many of the subjects are new to us, and because we wished to devote as much space as possible to the authors themselves.

*ART. II.—*An Introduction to the Use of the Stethoscope; with its Application to the Diagnosis in Diseases of the Thoracic Viscera: including the Pathology of these various Affections.* By WILLIAM STOKES, M.D.—12mo. pp. xiii. 226. Edinburgh: Maclachlan and Stewart, 1825.

[Concluded from page 333.]

IN our last Number, we laid before our readers a full account of the application of the stethoscope to the diagnosis of pulmonary diseases; on the present occasion we have to direct their attention to the assistance which may be derived from it in affections of the heart. In using it for this purpose, it is necessary to take care that the patient is under no mental or physical excitement: the very act of applying the instrument, for example, would in many produce such an effect on the action of the heart, as to mislead an inexperienced person. We ought, likewise, to avoid making the examination soon after any meal, as in most the pulse is accelerated at such times, and in many it is rendered very frequent, or even irregular.

The phenomena connected with the heart are divided into natural and pathological; an arrangement which we shall follow, beginning with the former.

“*Extent of the Pulsations.*—In a healthy man, whose heart is well proportioned, the pulsations are only heard between the fifth and seventh ribs on the left side, and under the inferior part of the sternum. The motions of the left cavities are heard particularly in the first, those of the right in the second situation. When the sternum is short, the pulsations may be heard in the epigastrium.

“In fat subjects, in whom the pulsations of the heart cannot be felt with the hand, the space in which we can hear them by means of the

* We request our readers to correct an error in the former part of this Review, as it interferes with the sense: instead of “we find it defined to be meaning,” read “we find it to mean.”—REVIEWER.

stethoscope, is sometimes limited to a surface of not more than a square inch.

"In meagre persons, on the contrary, whose chests are ill developed, we distinguish the pulsations over three-fourths of the sternum, from below upwards, sometimes even over the whole of this bone; over the superior part of the chest; and even under the right clavicle. In these cases, when the pulsation is less under the clavicles than in the precordial region, we may conclude that the heart is in good proportion.

"*The shock or impulse.*—By the impulse, is meant the feeling of elevation or percussion which is given by the pulsation of the heart. It is distinct under the stethoscope, when the hand, applied over the precordial region, can feel nothing. In a healthy man, especially if he is moderately fat, it is very little marked. We can distinguish it generally in the precordial region, and the inferior half of the sternum, and always with greater force between the cartilages of the fifth and seventh ribs, the point corresponding to the apex of the heart. Its force varies *ad infinitum* according to the constitution of the subject. Custom teaches us to distinguish when this force is greater or less than in the state of health.

"*The sound.*—In the state of health, the alternate contractions of the different parts of the heart give rise to sounds, easily perceivable by the stethoscope, whatever may be the size and force of the circulatory organ.

"Each pulsation of the heart corresponds to two successive sounds; the one, clear, distinct, and analogous to that produced by the valve of a bellows, corresponds to the systole of the auricles; the other, more dull and prolonged, coincides with the arterial pulsation, and the feeling of impulse mentioned above. It is produced by the contraction of the ventricles.

"The sound of the right cavities is heard in the inferior part of the sternum, that of the left between the fifth and sixth costal cartilages. It is always stronger in the precordial region than in the other parts of the chest, where it may be distinct in subjects in whom the parietes of the heart are thin.

"In these latter cases, the sound of the auricles is more distinct under the clavicles than that of the ventricles, which does not occur at the precordial region.

"In individuals in whom the anterior edges of the lungs are prolonged before the pericardium, the sound of the auricles is more obscure than that of the ventricles. In some cases the sound is no longer distinct.

"*The rhythm.*—By this term we understand the order in which the different parts of the heart contract, and the respective duration and succession of these contractions to one another. When the finger is applied to the pulse of a healthy man at the moment of its diastole, the ear applied to the stethoscope is slightly raised by a motion of the heart synchronous with that of the artery, while at the same time there is a dull sound: this indicates the contraction of the ventricles. Immediately after, and without any interval, a sound more distinct, and of shorter duration, announces the contraction of the auricle: no motion,

sensible to the ear, accompanies this sound. An interval of short but well-marked repose succeeds, after which a new contraction of the heart is heard.

"The respective durations of the contractions of the auricles and ventricles, appear to be pretty exactly determined in the following manner:—Of the whole time in which a complete contraction and interval of repose takes place, from a third to a fourth is taken up by the systole of the auricles, a little less than a fourth by absolute repose, and the remainder by the contraction of the ventricles. These relations exist, whatever may be the velocity or frequency of the motions, when the organ is healthy and in good proportion." (P. 136—139.)

The pathological phenomena are divided into those which relate to the extent over which the pulsations can be felt,—to the force of the pulsation, and the nature or intensity of the sound thus produced.

The extent of the heart's pulsation may be either increased or diminished; the augmentation usually proceeds in the following manner:—First, it occurs over the whole of the left side, at its anterior parts; next over the right side; thirdly, over the left side, at its posterior surface; and, fourthly, over the posterior part of the right side, which last, however, is of rare occurrence. The possibility of hearing the pulsations of the heart in these different situations, indicates, for the most part, debility of the organ, as thinness of its parietes or passive dilatation. It may, however, be produced by causes of a temporary nature, as emaciation, nervous agitation, &c.; or from circumstances foreign to the heart itself, as contraction of the chest, induration of the lungs, &c.

Dilatation of the heart.—In this, which constitutes the passive aneurism of CORVISART, the cavity of the ventricles is increased in size, the parietes at the same time becoming thin; the muscular substance is softened, and we have seen this proceed to such an extent that it could be torn or broken down by the fingers, like a piece of thick brown paper wetted.

"In this affection, the sound of the pulsations is clearer than natural in the precordial region. The ventricular contraction is distinct and sonorous; the extent in which we can hear the pulsations is increased, while the impulse is trifling.

"This disease may affect both ventricles; it is, however, more frequently met with in the right than the left. The part where the sharp distinct sound is heard, points out the cavity affected: thus, when it is heard between the fifth and seventh ribs on the left side, corresponding to the ventricular contraction, it forms the pathognomonic sign of dilatation of the left ventricle. The same sound heard under the sternum, or between the cartilages of the fifth and seventh ribs on the right side, indicates the dilatation of the right ventricle.

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"CASE.—A man of a lymphatic temperament, aged thirty one, entered the Hospital Cochin, on the 30th July, 1822, stating that, for the last six months, he had been several times attacked with severe colds, accompanied by hæmoptysis. He had now a cough, with abundant expectoration of a thick greenish mucus, not streaked with blood. Dyspnoea on the slightest exertion. Pectoriloquism over almost the whole right side of the chest, with a gurgling rale. Impulse of the heart very feeble; the sound of the ventricles was remarkably clear, almost similar to that obtained by striking on a tambourine; it was heard even at the posterior part of the chest, and only differed from that of the auricles in being a little more prolonged. Pulse small, feeble, and frequent.—Diagnosis: *Dilatation of the ventricles, with thinning of their parietes.*

"He died on the 17th of August, and the body was opened eighteen hours after death.

"Heart enlarged; its parietes soft, flabby, and thin. The right ventricle was not much enlarged, but the left greatly increased in size; and this dilatation must have taken place at the expence of the muscular substance, as the thickness of the left ventricle was hardly greater than that of the right. The auricles were not much altered, either in size or thickness; their valves were of a violet-reddish colour. The right lung presented many tubercular excavations, and was covered by a false membrane of considerable thickness towards the superior part. The left lung posteriorly was infiltrated with serum, and contained miliary tubercles, with a few tubercular excavations." (P. 141—144.)

Query: In the diagnosis of this case, why were the "many tuberculous excavations" in the right lung, and the infiltration of the serum, the presence of miliary tubercles, and the "few tubercular excavations" of the left, omitted?

Dilatation with hypertrophia.—In this disease, the cavities and parietes of the heart become simultaneously augmented; the muscular fibres become firmer than natural, and the apex of the heart becomes thicker.

"This alteration, which constitutes the active aneurism of Corvisart, is detected by the strong and extended pulsation in the region of the heart, which appears to repel the hand with force; by the hardness and volume of the arterial pulsations, which may be compared to a column of mercury striking the finger, and which are evident to the sight in many parts of the body. Percussion on the region of the heart gives a dull sound. The ear, on the stethoscope being applied over the heart, receives a strong impulse at each contraction of the ventricles, while a distinct sound is heard. The auricular contractions are sonorous; and the pulsations are heard over a great extent, while their rhythm is rarely altered." (P. 144.)

"Dilatation of the auricles is a case rarely met with, especially when we consider the comparative frequency of a similar affection of the ventricles. It is sometimes found to occur in patients suffering under hypertrophia, or dilatation of the ventricles; but most frequently this

does not occur. More rarely the auricles are found dilated, while the ventricles remain in their natural state.

“Dilatation of the auricles may depend on two different causes: first, upon an augmentation of their cavities, which takes place during life, and depends on hypertrophia of one of the ventricles, on ossification, or thickening of the auriculo-ventricular valves. Secondly, upon an apparent increase of size, which takes place during the last moments of life, from the accumulation of blood in the auricles, which become distended on account of the elasticity of their tissue, but return to their original dimensions when the distending cause is removed. In this case they are thin, and allow the colour of the blood to be seen through many points of their surface; while in the former there is generally some thickening of their parietes, and, upon being emptied through their own vessels, the auricles do not regain their original dimensions, but remain permanently enlarged.

“The signs of the auricular dilatation, obtained by means of the stethoscope, may be confounded with those of the alterations of the heart, to which the dilatation is owing. Thus, when the left auricle is affected, the signs obtained may be confounded with those of ossification of the mitral valve; and dilatation of the right auricle is difficult to be distinguished from hypertrophia of the ventricle on the same side. Nevertheless, it may be said that, whenever the auricles are dilated, the sound of their contractions loses the clear and distinct character peculiar to it in the state of health; becomes duller, and analogous to that produced by air suddenly issuing from a bellows.

“The diminution of extent in which the pulsations of the heart can be heard, is generally indicative of a thickening of the parietes of this organ, accompanied by diminution of its capacity. It occurs in softening of the heart, but most commonly in pure hypertrophia. (P. 148, 149.)

Hypertrophia.—When the left ventricle is affected with this, its parietes become thickened, the columnæ carneæ, and the inter-ventricular septum, participating in the disease; the cavity of the ventricle diminishing in proportion as its walls are thickened. When the right ventricle is the seat of this disease, the thickening is more uniform, and is said never to exceed four or five lines.

“When the left ventricle is in a state of hypertrophia, its contraction gives a stronger impulse and duller sound than in the natural state. The sound is prolonged in proportion to the degree of hypertrophia, and the contraction of the auricle is very indistinct. The pulsations of the heart are heard over a small extent, sometimes only between the cartilages of the fifth and seventh ribs.

“When the right ventricle is affected, the sound of its contractions is the same as in the former case, except that it is not quite so dull; the impulse is stronger at the inferior part of the sternum than between the cartilages of the fifth and seventh ribs on the left side, which is the contrary of what happens when the left ventricle is diseased.

“ When hypertrophia occurs in both ventricles, the symptoms met with are composed of those resulting from the affection of each, but generally those of the right side are predominant. (P. 150.)

Softening of the heart.—In this disease the muscular fibres become so soft, that they may be easily torn; the colour varies, —sometimes it is violet, more commonly of a pale yellow; in other instances it is whitish, the substance being flabby, but not friable.

“ The sound produced by the contractions of the heart, we have seen to be clearer in dilatation, and duller in hypertrophia. There is a disease of the heart, termed by the French authors *ramollissement*, which consists in a softening of its muscular substance; and in which the sound is duller than natural, and in some cases disappears altogether.

“ When, with little impulse, both the contractions of the heart give an equally moderate, dull, and obtuse sound, we may suspect that the heart is softened, but still in good proportion. When this affection is combined with dilatation, the sound, though still clear to a certain degree, is, however, duller than when the latter disease occurs by itself. When it coexists with hypertrophia, the sound of the ventricular contraction can hardly be heard, and in extreme cases disappears completely.” (P. 154, 155.)

Pericarditis.—The stethoscope has little to boast of in this complaint.

“ The symptoms of this affection are very obscure. Laennec himself has confessed that, even with the aid of the stethoscope, it is difficult of detection. M. Collin states that, in some cases of the acute species, he thinks there is heard a sound similar to that of the crackling of new leather, which he attributes to the dryness of the serous membrane, the first consequence of its inflammation. A similar dryness takes place in inflammation of the conjunctiva and the synovial membranes.

“ In chronic pericarditis, accompanied by effusion, the pulsations of the heart are obscure, tumultuous, and felt over a great extent of surface.” (Pp. 156, 157.)

Disease of the valves.—It is well known that ossification, or a state approaching to it, is much more frequently met with in the mitral valves and those of the aorta, than in the bicuspid or those of the pulmonary artery. The valves, indeed, are seldom perfectly ossified, more frequently presenting a cartilaginous appearance, with osseous particles; and this is generally more conspicuous at the apex than at the base. By this thickening of the parts, the aperture is occasionally very much contracted. The growth of warty excrescences may take place either on the valves themselves, or on the inner parietes of the heart: in the former case, they very much resemble venereal warts.

“ But there are certain sounds, not heard in the natural state, which M. Laennec first described as accompanying disease of the valves, or narrowing of the orifices of the heart; these are two in number, namely,

what the above author terms *bruit de rape*, and *bruit de soufflet*; the first analogous to that produced by a saw, and the second to that of a bellows.

"The first of these sounds is considered by M. Laennec to be indicative of ossification of the valves, their cartilaginous induration, or the growth of warty excrescences on them.

"When the mitral valve is affected, the sound of the auricular contraction is more prolonged, duller, and accompanied by a grating noise, which resembles that produced by a saw when drawn over a piece of wood. When the hand is placed over the heart, a vibratory sensation is perceived.

"When the tricuspid valves are affected, the sound is heard on the right side, while it is distinguished from that produced when the sigmoid valves are thus diseased, by the sound in the latter case being isochronous with the contraction of the ventricles, which is more or less prolonged.

"The cause of the second species of sound is still involved in great obscurity. This phenomenon appears to accompany contractions of different parts of the heart or arteries, but may, however, be produced in some individuals, especially those of a nervous temperament, without any alteration in the functions or structure of the heart. It is heard whenever we compress an artery, and listen to its pulsations by means of the stethoscope; also before hemorrhages, in the vessels that carry blood to the part where the bleeding takes place; and generally in palpitations, arising from any cause whatsoever. It is of a peculiarly inconstant character, appearing and disappearing in a short space of time; and may thus frequently mislead an inexperienced observer." (Pp. 160, 161.)

With the following observations on the application of the stethoscope to *aneurism of the aorta*, we terminate our quotations:—

"If, on applying the stethoscope upon the right superior part of the sternum, or under the right clavicle, we hear pulsations, and perceive an impulse isochronous with the pulse, much stronger than that of the ventricles in the precordial region, we may suspect that the ascending aorta or its arch is dilated, as it is extremely rare to find, even in hypertrophia, that the impulse is perceived beyond the precordial region. If this phenomenon is found constant after many examinations, it may be looked upon as affording a sure diagnosis of aneurism. In these severe cases, the pulsations are heard in the superior dorsal region.

"Aneurism of the abdominal aorta may be easily recognised by means of the stethoscope. In this case we hear the pulsations with a degree of intensity which could not be expected from the application of the hand over the affected part. The pulsations are simple; for the contraction of the auricles is not heard, even when the aneurism is above the trunk of the cœliac artery. The sound is clear and distinct, like that of the auricles, but is much stronger." (P. 167.)

In concluding this subject, we would remark, that the greatest misfortune that can befall any individual whose conduct is

subjected to inquiry, is the unmeasured praise of injudicious friends;—the surest means of sinking a remedy below its level, is to laud it above its merits, and so we suspect with regard to the stethoscope—its warmest admirers are like to prove its greatest enemies. That it is an instrument capable of some useful applications, such as may prove of occasional assistance, when employed in conjunction with, and subordinate to, that examination of the symptoms more usually adopted, we readily admit. But, when we see it placed before all these,—when we witness a practitioner judging of the presence of inflammation in the lungs, not by any reference to the cough, the pain, or the pulse, but solely from certain sounds emitted by this little instrument of mighty power, we cannot but smile at the infatuation, and lament that what might be of real use, if employed in moderation, is likely to prove worse than useless, through the enthusiasm of its patrons. We earnestly recommend to our readers to regard the stethoscopic examination as secondary only to those indications of disease manifested by symptoms; and, in cases of doubt, to distrust its infallibility, particularly where any practical question is involved. Used thus temperately, it will add one more to the various means we already possess of ascertaining the healthy or morbid condition of the thoracic viscera, and, as a guide to a practical acquaintance with the instrument, we recommend the work of Dr. STOKES.

DIVISION II.

FOREIGN.

ART. III.—*Precis Elementaire de Physiologie*. Par M. MAGENDIE, &c. &c. Second Edition.—Paris, 1825.

An Elementary Compendium of Physiology; for the Use of Students.

By F. MAGENDIE, M.D. &c. &c. *Translated from the French, with copious Notes, Tables, and Illustrations.* By E. MILLIGAN, M.D. Fellow of the Royal College of Physicians, of the Society of Scottish Antiquaries, Corresponding Member of the Literary and Philosophical Societies of Manchester and Leeds, Extraordinary Member of the Royal Medical Society, and Lecturer on Physiology and Therapeutics, Edinburgh. Second Edition, greatly enlarged.—8vo. pp. 618. Edinburgh, 1826.

ON a recent occasion we introduced to the notice of our readers the great work of RODOLPHI on Physiology, and we now beg to call their attention to the “Elementary Compendium” of M. MAGENDIE, on the same subject. The importance, indeed, of physiology is too obvious to require elucidation; and, to assert its interest and utility, is sufficient to command the assent

of our brethren. Yet we fear that too many content themselves with this acknowledgment, and look upon investigations of this nature with some degree of apathy, if not a little distrust. Probably, it is this latter feeling, more than any other, which has tended to prevent this most extensive and most important branch of science from taking the rank among medical studies to which it is unquestionably entitled. Nor, indeed, can we wonder at the scepticism with which many view the doctrines of physiology, when we consider the disposition on the part of most, if not all, writers upon the subject to go beyond their legitimate boundary,—to substitute imagination for reasoning, conjectures for facts, and words for ideas. Surely these remarks are not too severe, nor the censure more than is merited by those systems, in which *organic sensibility*, *nervous fluid*, *vital force*, and such like metaphorical and unintelligible expressions, betray the ignorance they are intended to disguise.

Opposed to these, which we may call the metaphysical systems of physiology, stands the author of the present work, and his views present a striking example of the tendency which reformers have to run into extremes. We mean that M. Magendie, in our opinion, regards too much the multiplying of experiments, and too little the conclusions to be drawn from them. Each new experiment is allowed to constitute a basis for its own little superstructure; so that the science forms an immense collection of detached facts, rather than a comprehensive whole. This strikes us as a considerable objection to the work before us; lessening its interest, at least, though not its accuracy. True it is that, in the present state of our knowledge, it may not be possible to reduce the materials to consistency and order, discarding what is useless, and fixing our attention upon what is really valuable. Yet he who would attempt this task would do more for the advancement of physiology than the most industrious among those who vary their experiments in a thousand ways, without object and without end. Such, we confess, appear to us to be the besetting sin of the French at present, among whom there is a set of young aspirants after fame, who seem only to live *pour faire les experiences*.

At the head of those who cultivate the science in this way, but greatly above his followers, stands MAGENDIE, one of the most industrious and dextrous experimentalists who has ever devoted himself to physiological pursuits. That he thinks more highly of the present mode of cultivating the science than we do, may readily be supposed. "Already (says he) the systems founded upon the organic functions, are no longer received with the same degree of favour; and, in order to publish a work of *romantic physiology*, it is now necessary to make, or to say that one has made, experiments.

“The mischievous and absurd prejudice, that physical laws have no influence upon living bodies, has no longer the same authority; intelligent persons begin to perceive that a great variety of phenomena may exist in living animals, and that actions simply mechanical by no means exclude actions simply vital. We shall hope that physiologists will no longer be proud to boast of their ignorance of the first principles of natural philosophy and chemistry, and of affording deplorable proofs of that ignorance in their works.

“It is now no longer doubtful that researches upon animal bodies may be applied, with admirable precision, to the phenomena of the life of man; the luminous clearness which the recent experiments relative to the nervous functions have thrown upon pathology, removes all uncertainty in that respect: but what proves, much better than I can express, how much the utility of physiological experiments is now felt, is the great number of persons applying themselves to researches of this kind; and the rapidity with which new, unexpected, and important discoveries, succeed each other for some time, and make of the science of life an entirely new system.

“But a few years, and physiology, intimately connected with the physical sciences, shall not be able to make a step without their succour: she will acquire the rigour of their method, the precision of their language, and the certainty of their results: by raising herself thus, it will soon be out of the reach of that ignorant rabble, which, blaming without ever comprehending, is always present and frequent when the object is to oppose the progress of science. Medicine, which is only *the physiology of the sick man*, will soon follow in the same path,—soon reach the same height; and we shall then see all those degrading *systems* which have disfigured it for so long a period, rapidly disappear.” (P. xviii. xix.)

The first edition of the work before us appeared some years ago, and an account of it was soon after laid before the readers of this Journal. The present edition, however, demands that we should take some notice of it, as it contains many important alterations and additions, embracing discussions on the recent discoveries in the nervous system, and many new facts concerning the blood, respiration, animal heat, motion, imbibition, and absorption, deduced from the labours of BELL, ROLANDO, and FLOURENS; EDWARDS, PREVOST, and DUMAS; DESMOULINS, DULONG, GASPERD, SEGALAS, and various others. The principal interest and importance of the work, however, depend upon its containing a condensed and perspicuous account of the various discoveries and physiological doctrines of the distinguished author himself.

We have now to say a few words respecting Dr. MILLIGAN's part—the English dress in which he has presented to us the Compendium of M. MAGENDIE. This is scarcely elegant; but it is plain, and the meaning of the author seems faithfully rendered,—a sovereign quality in a translation. We were inclined, indeed, to be somewhat more critical; but we find, on turning to the Preface, that Dr. M. deprecates censure, apologising (as it were) by anticipation. “The translator has long thought that much of the obscurity and *ennui* of physiological discussion arises from that obscure polysyllabick dialect in which it has hitherto been couched; and, to avoid this inconvenience, he has studied plainness of language, almost to rusticity.” Now, we must crave permission to differ from Dr. Milligan on this point. That “obscurity” may, or rather must, have resulted from adopting “obscure” dialect, is very obvious; and he has therefore done well to avoid these, as well as the inflated and “polysyllabick” language too often employed to cover the lack of clear and precise ideas: but we cannot imagine in what manner obscurity is to be diminished, or *ennui* avoided, by the substitution of language plain *almost to rusticity*. Fidelity, however, we repeat, is the first recommendation of every translation; and to this praise we believe the one before us to be fully entitled.

The labours of Dr. Milligan, however, have not been confined to the mere drudgery of rendering his author into English; he has added, in the form of Appendix, copious and valuable notes, in which we find discussions on the Tissues of BICHAT, with tables; on the doctrine of a Double Life; on the Secretions; the Anatomy of the Eye; the Yellow Spot of SOEMMERING; the discoveries of KNOX; the Ciliary Processes; the Canal of PETIT; on the Voice; Muscular Contraction; Respiration; Absorption; Sympathy; Sleep; Craniology, — —, the last being somewhat too much of a controversial nature.

To give any account of the contents of this volume, extensive as the subject is, would occupy much more space than we can devote to; while its elementary nature would render it uninteresting. Our object has been to direct the attention of our readers towards it, and we can confidently recommend it as the most extensive collection of physiological facts which has recently been published.

MEDICAL AND PHYSICAL INTELLIGENCE.

PHYSIOLOGY.

1. *Animal Magnetism*. — THIS seems again about to occupy the attention of the French medical school. At a late meeting of the Academie Royale de Medecine, M. HUSSON, in his own name and that of several other physicians, read a Report on the question, Whether the section should again consider the subject of animal magnetism? The commission concludes affirmatively,—1st. That the judgment given in 1784, by the members of the Academy of Sciences, and of the Royal Society of Medicine, charged with the examination of the subject of animal magnetism, ought not to interdict a fresh examination; since, in matters of science, a first judgment has been too often found defective, and because the searches made by them had not been made with all the care that the habit of experimenting has now introduced in the exposition of facts.

2d. That the magnetism on which judgment was pronounced in 1784, differs entirely, both in theory and practice, and its phenomena, from that which is now to be considered.

3d. That magnetism, having now fallen into the hands of learned men and physicians, and being a special subject of study in most of the colleges of medicine in other countries of Europe, it is for the honour of French physicians not to be behind those of other nations. In fact, that, in considering magnetism as a secret remedy, it is not only an amusement, but a duty of the Academy to take notice of it.

The discussion on this interesting subject has been postponed for some future meeting.

M. I. AMADEE DUPAU has just published a work relating to this subject, "*Lettres Physiologiques et Morales sur le Magnetisme Animal*," in which there is much interesting matter. He considers the moral influence of the magnetism to be very great over his patients, and that much danger is to be apprehended, both to the public morals and the safety of private families.

One of the advocates for the system, M. ROSTAN, speaking of the influence acquired by the operator over the patient, says, "that she would follow him as a dog follows his master." If this be true, it is high time for fathers, husbands, and brothers, to look about them.

2. *Uterus wanting*.—M. RENAUDIN presented to the Academy of Medicine the genital organs of a woman, in whom the uterus was wanting. This woman, fifty-two years of age, died of a cancerous affection of the stomach; she was of very small size, not more than three and a half feet in height; her intellects imperfect; and she had never menstruated, neither had her breasts ever been developed. The parts of generation externally were well formed; the hymen existed in part; and a finger, introduced into the vagina, encountered, instead of the neck of the uterus, a small tubercle, possessed of little sensibility. Between the bladder and rectum, instead of a uterus, was a kind of firm cord, about the size of a quill, communicating at one extremity

with the vagina, and also with the fallopian tubes. These tubes, very much enlarged at the point where they opened into this canal, formed there a kind of sac. Some traces of ovaria were faintly perceptible. On slitting open the vagina and this little canal, the first was found to be properly formed, and the last, which was only an inch in length, was evidently, both from its consistence and organisation, the neck of the uterus imperfectly formed; the body and fundus of that organ being altogether wanting. (*Archives Generales*, Mars.)

PATHOLOGY.

3. *Aneurism of the Aorta*.—Wm. Simpson, aged thirty-seven, a man much addicted to drinking, a private in the Coldstream Guards, was admitted into the regimental hospital on the 13th instant. He was evidently very ill, and had been suffering for several weeks with great difficulty of breathing and bad cough. Early in the night before his admission, he began to spit blood, and continued to do so all night, occasionally in considerable quantity. He was coughing, and spitting up large mouthfuls of blood at this time, and complained of being very weak and faint. The pulse was labouring and oppressed, and a large quantity of blood was therefore taken from his arm. He took ol. ricini; was ordered a blister to the chest, and two grains of the acetate of lead, made into a pill with the conf. opii, every three hours. In the evening, he said that he was rather easier, and his cough was less troublesome. The following night was passed badly; he had been sick, and vomited, and felt very ill; he was restless and anxious, but did not complain of suffering pain or uneasiness about the chest, but only of a stoppage at his throat, which made his breathing difficult; his cough was very frequent, and he still continued to spit blood. About two o'clock P.M. he vomited largely; about half an hour after which, in again straining to vomit, he threw up about a pint of blood, sunk backwards in his bed, and expired.

The body was examined on the 16th, and the following appearances presented themselves:—On raising the sternum, both lungs appeared elevated and protruding forwards, yet they were in appearance healthy; that of the left side was quite sound. The right side of the thorax was full of blood, in part coagulated and partly fluid: the quantity amounted to five or six pints. This was carefully removed, and the surface of the lung examined, in order to discover the breach through which the hemorrhage had taken place. At the back part of the lower lobe, a round opening, large enough to admit the passage of a half-crown piece, was discovered, and a grey-coloured coagulum lay in the opening. Under the impression that all the mischief was confined to the lung, it was about to be removed; but, on cutting between it and the spine, to detach it at the root, a cavity was laid open leading to the left, and in it the same grey substance which appeared through the opening in the lung. Passing the finger within this cavity, four or five carious vertebræ were felt; it then became apparent that this was an aneurism.

The heart was next examined: it was healthy, and rather a small one.

The quantity of serum in the pericardium was greater than natural. The finger was then passed through the cavity into the arch of the aorta up to the heart; next dividing the aorta below the diaphragm, it was dissected upward. The dilatation lay about half-way between the diaphragm and the curvature, occupying the space of four vertebræ in length. The vessel was quite membranous. The aneurismal sac was formed of the aorta, the spine, the pleura of the right side, and a portion of the inferior lobe of the right lung. The vertebræ were carious; the pleura was thickened almost to cartilage, and the lung hepatised. The coagulum of the aneurismal sac was shaped like a tongue, the apex and body lying on the spine; the thicker and more irregularly shaped part, corresponding to the root, was contained in the cavity formed within the substance of the lung: the interior of this was laminated. The substance of the lung being the weakest part of the boundary of the sac, was the first to yield to the impetus, and gave way finally into the cavity of the thorax. (*Private Letter from Mr. MAYNARD, Surgeon, Coldstream Guards.*)

4. *Disease of the Lungs.*—At a meeting of the Académie Royale de Médecine, M. LAENNEC presented a lung, which showed some important alterations. It was taken from a man, aged seventy-two, who died from an hæmoptysis of nine months' duration, and which had been in vain opposed by bleeding, purgatives, white oxyde of antimony, blisters, &c. During life, percussion of the thorax had given a flat sound on the right side and behind; respiration did not reach that place. A sonorous rale, on the contrary, was heard in the larger bronchiæ. The patient died from weakness, always increasing. On opening the body, two pounds of serum was found in the right side of the thorax; the lung of that side adhered to the pleura by organised bands, and showed on its surface many schirrous granulations. Its tissue exhibited the alteration known by the name of grey hepatisation, and, scattered here and there, several hæmoptoic points. Many of the branches of the bronchiæ of this lung were evidently infiltrated with that kind of accidental production called cerebriiform matter. The heart, although not altered, was covered on its anterior face with similar cerebriiform matter, forming a coat nearly two lines in thickness, and sprinkled over with little vessels. The right division of the pulmonary artery presented an ancient fibrinous concretion, which adhered firmly to the coats of the vessel. (*Revue Médicale.*)

5. *Neuralgia from a Wound.*—M. LISFRANC relates the following case:—A man had been struck by a fusil on the sinciput. From this simple contusion of the soft parts, a violent and permanent pain had resulted in the part which had been stricken, with an extreme sensibility of the organ of vision, with other symptoms, both local and general, characteristic of the above complaint. M. Lisfranc removed, by two semicircular incisions, that portion of the integuments which was the seat of the pain; and, by causing the wound to suppurate, effected the cure. M. GEMELLE adds, that, in several analogous cases at the military hospital of Gros Caillou, he succeeded in removing the symp-

toms by a simple incision down to the bone, which he permitted to suppurate. (*Archives Generales.*)

6. *Bones containing Metallic Mercury.*—These were found in two subjects, both young. In the first, the ribs, the ossa ilium, the upper and lower bones of the leg, exhibited this appearance on being struck; and at present, several years after, mercury can still be shaken from them in the same way. The metallic mercury flowed out upon the dissecting tables, macerating tubs, and other apparatus employed by Professor OTTO, and his friend Dr. GURET, whilst in the act of cleaning the bones. A piece, taken from the middle of one of the bones, was analysed by Professor FISCHER, and demonstrated evidently the presence of mercury. In fine, Dr. Otto has published these two singular facts, as affording “the most undeniable evidence of what is so generally doubted, the power of the living system to reduce the oxides of mercury, and the actual appearance of the latter, so reduced, in the bones.” (*Edinburgh Journal of Medical Science*, No. 2.)

7. *Hydrophobia in the Horse.*—I had yesterday (April 25th,) an opportunity of witnessing hydrophobia as it occurs in the horse. The following are the particulars:—

Five weeks ago, a stable dog at Mr. Anderson's bit a coachman, who immediately had the parts cut out and cauterised. Having observed, during the night, a great “to do” between the dog and horse, a *regular practitioner* in this department of the healing art being called in, declared the dog to be rabid, and he was destroyed. The horse, which was of a remarkably quiet and docile disposition, did not appear to suffer any inconvenience, till a few days ago, when he became dull; and in the evening of the 24th, he was bled. Next morning, Mr. Bowtall, a respectable veterinary surgeon, was sent for; who informs me that he found the horse very nervous, with a small weak pulse, about forty, (the natural pulse of the horse is from forty to forty-five.) The horse was again bled, and a laxative ball was administered, together with some “fever medicine.” He was then removed to Mr. Bowtall's Infirmary.

During the day, his symptoms continued to increase rapidly. On an empty pail being placed before him, and some water poured into it, he became affected with convulsions of the jaws and throat, but afterwards drank a considerable quantity. One of the earliest symptoms of illness had consisted in an entire change of disposition, so that he now rushed at any one who went near him; and his groom, trusting to the horse knowing him, and thus venturing within his reach, had nearly been bitten. Between six and seven, when I saw him, he was breathing very hard, and seemed much exhausted. His head appeared to be pulled down towards his chest by a frequent nodding motion, which seemed to be convulsive; saliva, tinged with blood, flowed copiously from his mouth; his eye was wild, and his whole appearance expressive of great anguish and ferocity. He was placed in a part of the stable separated from the rest by a partition, which was surmounted by an iron railing: he remained for a few minutes without taking any notice, till a groom, who stood by me, called to him, when he turned suddenly round, mak-

ing a plunge at us, and dashing his head through between the bars with such violence as to bend them, and cover my hand, at which he snapped, with saliva. After this, or any similar exertion, he fell, and remained unable to rise for some time after.

He was killed in the evening; and, on opening the body this morning, no morbid appearance was discovered, except a slight degree of inflammation about the heart. R. M'C.

April 26.

PRACTICAL MEDICINE.

8. *On Bleeding in Pulmonary Inflammation.*—In a short Essay on Bleeding in Pulmonary Inflammations, by M. DUCASSE, fils, after regretting that some men, highly esteemed in the profession, had renounced general bleeding, and trusted entirely to the local application of leeches, (which M. Ducasse thinks most inefficacious in the treatment of active inflammations,) he goes on to prove, by reasoning, the necessity of general bleeding to accomplish the ends desired in treating inflammation, and which ends, he thinks, cannot be accomplished by leeches. In support of his opinions, he cites some cases where the effects of general bleeding are decided, and he sums up his reflections by proposing four rules.

1st. That, in pulmonary inflammations, the evacuation of blood is the most efficacious remedy.

2d. That this evacuation, to do good, must be abundant and repeated.

3d. That the bleeding by opening veins, is that which should chiefly be used.

4th. That leeches can never take place of venesection, and ought only to be used as secondaries in the treatment of inflammation.

These rules are well known and acted upon in this country; but in France, where this decided mode of treating inflammatory complaints is not by any means generally adopted, they cannot be too often repeated. (*Revue Medicale.*)

9. *Case of a Child, ten months old, who took twenty-four grains of Calomel at two doses.*—Mary Ann Brannan, a female child, ten months old, was brought to me on Tuesday, March 14. She had what might be called a *hydrocephalic* expression, lying in the mother's arms, with the head thrown back; with lack-lustre eyes, strabismus, frequent convulsive twitchings of the face, and in that general state of stupor and abandonment so characteristic of this disease. I remarked to the pupils that it was probably a case of hydrocephalus, and then proceeded to examine more minutely the state of the symptoms. I found that the child had been apparently well till a week before, when it had been seized with fits of screaming, the cause of which was not apparent, as there had been neither derangement of the bowels, nor other obvious indisposition, to account for the occurrence. It was now also observed that the child shut its eyes when the face was turned towards the light, and that it could not be induced to take notice of any thing, although it

had formerly been lively. This state appears rapidly to have passed into coma, as the mother said the child had slept nearly the whole week, except when affected with a paroxysm of screaming. At present, in addition to the above-mentioned appearance of countenance, &c. I find the pupil is contracted, remaining in the same state when placed in the shade, and when exposed to bright daylight or to that of a candle: she obviously dislikes the light, as the experiment excited some stifled screams, and increased the convulsive movements of the face.

Two grains of calomel were ordered every two hours. Twelve such powders to be sent.

16th.—The mother having neglected to give her address, the patient was not seen yesterday. The calomel ordered on the 14th, instead of being divided into separate powders, was inadvertently given in one, containing the whole twenty-four grains. The parents having procured this at seven in the evening, and supposing it intended for two doses, gave half of it at that time, and the other half about two hours after. Some, but not considerable, vomiting followed the first dose; and the second was followed by vomiting still more slight: whether any (and if any, what quantity,) of the calomel may have been thus ejected, it is impossible to ascertain. Some hours afterwards, the child began to pass copious green stools, which the mother compared to “chopped parsley and water.” It is conjectured by the parents that a dozen such evacuations took place in the course of Tuesday night and Wednesday. Towards yesterday afternoon the purging subsided, and the last motion was passed this morning at two o’clock: it is said to have been costive. During the operation of the medicine, the child appeared much exhausted, but seemed more alive to pain than it had been since the first days of its illness, crying in a natural manner, and appearing to the attendants to be griped.

At present the child notices what is passing around it, following with its eye any one who moves; the expression of the face is natural; the squinting is gone; the pupil contracts on turning it towards the light, and again dilates in the shade. There is no appearance whatever of coma or convulsions. It has not taken the breast this morning: during the night, and ever since the calomel was administered, the milk, and every thing else (as thin panado), has been vomited.

To have two tablespoonsful of lime-water, with an equal quantity of milk, three or four times a-day.

17th.—Medicine retained. Has slept quietly, although not longer than half an hour at a time during the night. Has taken the breast well, and without subsequent vomiting; and has passed two natural stools.—To be put into a warm bath to-night, and to continue the lime-water.

26th.—The child has had no symptom worthy of notice since last report, and seems now to be quite well.

R. M.L.

STATISTICAL MEDICINE.

10. *Annual Report of the National Vaccine Board to the Secretary of State for the Home Department.*

To the Right Honourable ROBERT PEEL, Secretary of State, &c. &c.

SIR,—According to the Bills of Mortality for 1825, the deaths by small-pox amount to 1,299; a much greater number than has been reported for some years past. We had reason to apprehend, from our communications with medical practitioners in various parts of the country, that this disease had prevailed lately with more than its usual malignity; and our suspicions have been confirmed by what has occurred in the metropolis.

From this melancholy statement, it is impossible to avoid the conclusion that, although during the last year 2000 more persons have been vaccinated by our stationary vaccinators, than during any former year, yet the lower orders of society continue to be prejudiced against vaccination, and so careless of the issue, that they still allow small-pox to take its course.

And yet what argument more powerful can be urged in favour of vaccination, than the daily remark which the least observant must make, that, in our churches, our theatres, and in every large assemblage of the people, to see a young person bearing the marks of small-pox is now of extremely rare occurrence?

To what can the freedom from the vestiges of so loathsome a disease be attributed, but to the protecting influence of vaccination? for inoculation has now been disused by all respectable practitioners for some time past.

That a considerable number of persons have had small-pox after having been vaccinated, we are ready to admit; although, of cases of this kind presented to us, a large majority are found, on examination, to be without that test of the operation having been performed successfully and effectually, which all agree to be necessary to perfect security; yet some, from a peculiarity of constitution, similar to that, perhaps, which admits the small-pox twice, are still susceptible of the variolous infection.

But we do, at the same time, continue to contend, on the fullest evidence, that the subsequent disease is a safe one, and frequently as mild as the chicken-pox; which, when it occurred, as it often did after inoculation, occasioned neither alarm nor surprise.

Vaccination, therefore, it will be said, does not afford an absolute and perfect security. We do not present it to the world with that pretension; but we declare that it is the least imperfect of the resources which we possess,—that it has as many advantages over inoculation (which we desire it should supersede,) as the latter has over the natural small pox; besides this great and peculiar merit, that it communicates no contagion: for it should be remembered that inoculation, wheresoever it is used, there it establishes immediately a source of infection; and it is notorious that, whatever protection individuals might experi-

ence from it, the mortality in London was eventually increased by it, as it was the occasion of keeping up a constant supply of contagious disease.

We continue to receive applications from all quarters of the world for vaccine lymph; and, in answer to our correspondents, never fail to communicate to them such improvements in the management of vaccination, as our experience may from time to time suggest. That the success of this great resource depends very much on the manner in which the process is conducted, is proved by our own observations in this country, and is amply confirmed by the accounts which we receive from the continent; in many parts of which, where the method inculcated by this Board has been adopted, the small-pox may be said to be almost, if not altogether, extirpated.

(Signed by the usual Officers.)

11. *Particulars of the twelve fatal Cases of Small-Pox subsequent to presumed Vaccination, which occurred at the Small-Pox Hospital in 1825.*

No.	Name.	Age.	When and where Vaccinated.	Character of Cicatrix.*
1	John Richardson	26	in the country.....	not perceptible.
2	Samuel Lacey ..	25	ditto	small.
3	Sarah Woof	23	ditto	ditto.
4	Robert Hanson ..	25	reports himself to have been vaccinated	not perceptible.
5	John Tubb	27	in Hampshire, at ten years of age	ditto.
6	Eliza Olney	18	at Hitchin, Herefordshire	large and smooth.
7	Stephen Booth ..	22	in Cheshire.....	large and long.
8	Thomas Cater ..	25	in Worcestershire	large.
9	William Johnson	27	in Bedfordshire	small, not indented.
10	W. Wells	19	in the country	like a large burn scar.
11	Henry Smith	22	in Suffolk	could not be ascertained.
12	Mary Butler	23	in Wiltshire	hardly perceptible.

12. *Letter from Sir HENRY HALFORD, President of the Board of the National Vaccine Establishment, to HENRY HOBHOUSE, Esq. Under Secretary of State, &c. &c. &c.*

SIR,—In obedience to the orders of Mr. Secretary Peel, the Board of the National Vaccine Establishment proceeded, without delay, to consider the Report of the Physician of the Small-Pox Hospital. The only part of that Report which seemed important, was that which stated that twelve persons had died of small-pox, in the Small-Pox Hospital, after vaccination.

* The following are the characters of a perfect cicatrix:—It should be distinctly defined, perfectly circular, indented, radiated, and not larger than the size of a common wafer. The diameter of the scar, however, is of less importance than its circular and well-defined edge.

To authenticate this fact, if it were a fact, the Board requested the attendance of Dr. Gregory, the physician of the Small-Pox Hospital, and author of the Report; and they believe that they cannot meet the wishes of the Right Honourable Secretary, for information on the subject, and for a refutation of the statement (if it could be refuted), better than by subjoining the questions put to Dr. Gregory, and the answers given by him. They were as follows:—

Q. When a person has been vaccinated successfully and effectually, do you not expect to find a cicatrix indicative of this in the arm?—A. Most certainly.

Q. Will you describe the character of the cicatrix which marks a perfect vaccination?—A. It should be very distinctly defined, perfectly circular, with indentations, and of a size not larger than that of a small wafer, or a sixpence.

Q. Did this characteristic mark of a perfect vaccination appear in the arm of John Richardson?—A. Certainly not; and, with regard to all the rest of the twelve, excepting William Johnson, the characteristic mark was wanting.

Q. Then you would have been justified in concluding that their vaccination had been imperfect and ineffectual, such as could not protect them against small-pox at any subsequent period of their lives?—A. Such marks ought not to have been received as evidence of the peculiar protection of vaccination.

Q. In fact, they might as well not have been vaccinated at all?—A. I believe as well not vaccinated at all.

Q. Have you any other proofs to state of their having been vaccinated previously to their taking the small-pox, of which they died?—A. No other distinct proofs. They all, meaning the twelve persons, had the persuasion that they had been vaccinated.

I am, &c.

HENRY HALFORD.

January 25th, 1826.

It is, of course, in reference to the above that we have received the following letter:—

To the Editors of the London Medical and Physical Journal.

GENTLEMEN,—Among the papers relative to vaccination, ordered to be printed by the House of Commons, is a letter from Sir Henry Halford, to Henry Hobhouse, Esq., containing certain queries put to me by the National Vaccine Board, and my answers thereto. By the introductory remarks, it would appear as if these answers were considered by Sir Henry as “a refutation of the statement” which I made in the last Annual Report to the Governors of the Small-Pox Hospital. I beg permission to state, through the medium of your widely-circulated Journal, that those answers are not considered by myself as refuting, in any degree, any of the statements made in my late Report, but merely as expressing in other words my opinions on the subject of imperfect vaccination. As the substance of my Report appeared in your Journal for February 1st, your readers, by a comparison of that with

Sir Henry Halford's letter, have an obvious means of judging for themselves.

I remain your very obedient servant,

GEORGE GREGORY.

8, Upper John-street, Golden-square;
March 22, 1826.

13. *History of the Small-Pox as it appeared on board His Majesty's Ship Phaeton.*—

Victualling Office, 15th October, 1825.

GENTLEMEN,—Agreeably to the request contained in Mr. Barrow's letter of the 27th ultimo, I repaired to Portsmouth, and made a particular inquiry into all the circumstances connected with the late visitation of small-pox on board his Majesty's ship Phaeton, on her passage to America, and have likewise seen and examined every officer and man remaining in the ship who had suffered from the late attack. I have to submit the following Report to the Board thereupon.

The Phaeton sailed from Portsmouth in the beginning of June, and on the 16th of that month Thomas Witcher, the boatswain's yeoman, was attacked with a disease, which in a day or two showed itself to be small-pox. This man had been allowed a few days' leave of absence, to visit his friends before the ship sailed; and it was discovered, after his illness, that the small-pox was raging in the same house wherein he took up his abode. His disease proved very severe, and he died on the 29th June, in Funchall Roads, at the island of Madeira.

On the 4th July, the disease again made its appearance amongst the midshipmen, and, in the course of five or six days, there were no less than seven midshipmen and nine of the ship's company attacked.

All the young gentlemen had been vaccinated when children; and I ascertained, by personal examination in all but one case, that the cicatrices were most perfect, and I have no doubt that they had passed under the influence of the vaccine inoculation in a regular and satisfactory manner.

Of the nine belonging to the ship's company, three stated that they had undergone vaccination when young; two were vaccinated by the surgeon on board; and two stated that they had had the small-pox in the natural way. The remaining two were boys, who had been vaccinated by the surgeon a few weeks before leaving Portsmouth.

With respect to the first three who stated that they had undergone vaccination, I have to observe that, in the case of Charles Clements, I have very great doubt whether he has passed through this operation in such a manner as to give reasonable hope of security; and, as regards the two, viz. John Thomson and John Smith, I am fully convinced that they never underwent vaccination in a proper manner. The first of the three had a very indistinct and unsatisfactory mark on his arm; the other two had nothing whatever to show. There were likewise some anomalies attending the cases of the two last, which will be noticed hereafter.

The second two, J. Reid and J. Munns, were passing through the stages of vaccination when attacked. The attack of Reid took place

on the sixth day after vaccination, and that of Munns on the fourteenth: Reid fell a victim to the disease, and Munns escaped with difficulty.

The cases of J. Vick and William Colerigg, the surgeon considered to have been second attacks of small-pox. Vick declared to the surgeon that he had passed through the disease in a natural way, and showed marks on different parts of his body, which satisfied that gentleman of the truth of his assertions; but, as he was covered with the marks of his recent attack when I visited the Phaeton, it was impossible for me to decide. Colerigg, who died on the eighth day of his illness, stated that he had passed through the disease (small-pox) on board the *Salvador del Mundo*, in 1811; and Mr. Crichton, the surgeon of the Phaeton, who was an assistant surgeon of the *Salvador del Mundo* at the period, informed me that both small-pox and measles certainly prevailed on board that ship at the time mentioned, but that he did not recollect the individual. I have examined the surgeon's journal, and also the books of Plymouth Hospital for that year, but the name of Colerigg does not appear in either.

Regarding the boys, I have to observe, that they had been recently vaccinated on board, and passed through the disease in a very mild manner.

With the intention, however, of placing before the Board a condensed view of the cases of these individuals, I have drawn up the accompanying table, which contains every thing necessary to illustrate the most interesting part of the question of vaccination.

Of the whole number attacked, ten appear to have been properly vaccinated; of these, seven were severe: all recovered. Of two who were under vaccination at the time of the attack, one died, and the other narrowly escaped. Of three who had neither been vaccinated nor had passed through the small-pox, one died; and in the cases of the other two, J. Thomson and William Smith, the symptoms were of an anomalous nature.

The case of Charles Clements was one of a very doubtful aspect as to vaccination, and he passed through the regular stages of small-pox in the usual manner. Of two who declared that they had had small-pox formerly, one died and the other recovered.

Though, upon a consideration of the foregoing facts, I am obliged to confess that vaccination does not afford all the protection from small-pox which had at one time been anticipated, still there can be no doubt that it has had a most beneficial effect in modifying the disease; yet it must also be allowed that the proportion of three severe cases in ten is a considerable number. It should, however, be taken into consideration that the weather was then exceedingly hot, the thermometer being about eighty degrees in the shade, which, under any circumstances, must have had the effect of increasing the febrile action.

(Signed)

W. BURNETT.

To the Board.

[For the Table, see next page.]

<i>Names, Ages, and Qualities,</i>	<i>Whether Vaccinated or not.</i>	<i>Date of Attack.</i>	<i>Eruption appeared.</i>	<i>Fever ceased.</i>	<i>Eruption began to decline.</i>	<i>Whether secondary fever appeared.</i>	<i>Event.</i>	<i>Remarks.</i>
Thomas Wicher	not	1825.						
Mr. Moore, midshipman	at. 16	16 June	became confluent	9 July	9 July	—	died 29th June.	
Mr. Sleight, master's assistant,	at. 20	4 July	8 July	—	13 July	none	recovered.	
Mr. Busk, midshipman	at. 22	ditto	7 July	ran its course in a few days		none	returned to duty 26th July.	
Mr. Lee, midshipman	this case was the same as Mr. Busk's.						do. 20th July.	
Mr. Warden, midshipman	at. 19	ditto	8 July	& became confluent		appeared	do. 30th July.	
John Reid, A. B.	at. 19	ditto	9 July	—	—	—	died 30th July	This man was indisposed on 1st July, apparently from his vaccine pustule; on 3d, he was well. He suffered much from an old pulmonary complaint during his illness.
J. Massie, midshipman	at. 16	7 July	eruption very trifling	—	—	none	recovered	Many of the pustules did not arrive at suppuration, though the eruptive fever was brisk.
John Harvey, mate	at. 23	ditto	8 p.m.	9 July	16 July	none	recovered.	
Ch. Clements, captain after-guard,	at. 35	ditto	the eruption in this case went through the stages in a distinct manner				recovered.	
William Colerigg, A. B.	at. 28	ditto	8 July	became confluent	—	appeared	died 17th July	This man showed the surgeon marks having the appearance of a former attack of small-pox.
T. Avenall	at. 13	ditto	10 July	completed the stages in a very mild manner		ditto		
J. Sutton	at. 12	ditto	no pustules appeared.	—	—	none	recovered	This man had no pustular eruption, but had an efflorescence, which on its disappearance left dry scales on the surface of the skin.
J. Thomson, seaman	at. 20	ditto	9 July	12 July	17 July	none	recovered	This man showed the surgeon satisfactory marks of a former attack of small-pox.
J. Vick	at. 30	ditto	ditto	19 July	20 July	appeared	recovered	
J. Munns, seaman	at. 27	8 July	ditto	10 July	—	none	recovered	The eruption in this case had become pustular. He returned to duty 20th July.
John Smith, seaman	at. 20	ditto	5 August	9 August	—	slight on 15th	Baltimore hospital; 26th, doing well.	
J. Pritchard, under-butler to the Right Hon. Mr. Vaughan		3 Aug.						

SURGERY.

14. *On the Application of the Actual Cautery in the Erysipelas following Wounds.*—"The actual cautery, (says M. Larrey,) applied to the points reddest and nearest the wound, stops instantly the progress of the inflammation. This application, which causes scarcely any pain, is immediately followed by a gaseous effluvium, of an animal odour, rendered visible by a slight smoke which surrounds it, and by the disappearance of the redness, tense pain, and swelling of the parts. These cauterisations are not followed by suppuration, and are not capable of producing gangrene, as rubefacients are. The burnt parts of the cutis fall off in little charred scales, leaving no sensible cicatrix. The flow of pus from the wound, the suppression of which had preceded the erysipelas, is almost immediately restored; the strength of the patient increases; the weakened functions of the viscera, particularly the stomach, are strengthened, and thus concur in bringing the disease to a resolution."

M. Larrey does not attempt to explain the effects of the cautery; he only wishes to draw the attention of practitioners to the fact: he accounts, however, for some of the effects of the actual cautery. Its causing no sensible pain, he believes to arise from a coating, more or less thick, of a network of vessels, injected and covered with the epidermis already disorganised: which coating, he thinks, isolates and protects the nervous tissue of the skin. The burns do not suppurate, because the cautery has equally spared the sensible tissue of the skin, in which are found the only arterial vessels susceptible of producing suppuration; and, the skin itself not being broken, no cicatrix is left.

He relates two cases where the erysipelas, and adynamic fevers which accompanied it, disappeared, as if by enchantment. In the first case, six days after a contused wound of the right leg, the edges of the wound took on an erysipelatos character, and a general nervous affection showed itself. The erysipelas enlarged, and soon covered the whole limb and foot, which swelled. On the eleventh day, well-marked red lines stretched up the thigh, and little gangrenous spots showed themselves around the wound. The sensibility of the limb was considerably diminished: it was much puffed, and of a reddish violet colour. There were present nausea, vertigo, and much disturbance from the weight and tightness of the limb; pulse small and feverish; tongue black and dry; eyes dull and tearful; urine in small quantity, and black. A vomit was given, and some diluents; the limb wrapped in compresses, moistened with camphorated vinegar. At the next visit, finding the erysipelas in the same state, and the patient in much danger, it was decided to use the actual cautery to all the principal points of the erysipelatos swelling; beginning by the red bands on the thigh, then gradually coming to the knee, and leg, and foot, taking care to leave considerable distances between the cauterised points, and to end where the skin was adherent to the bony projections. Fifty little knobs of red hot iron were thus applied in less than ten seconds; and a moxa was used on the epigastrium. Compresses, with the camphorated vinegar, were applied. Low diet. At the next visit, the erysipelas was almost

entirely gone, and the swelling of the limb considerably reduced; good suppuration was established in the wound; tongue had become moist, and cleaner; and the patient was so much improved, that, though not able to speak on the previous night, he now loudly said he was better. The same day he had some dark and extremely fetid alvine evacuations. In less than three days, all symptoms of the erysipelas had disappeared; and shortly after the patient left the hospital. The burnings were not followed by suppuration, and no cicatrices were left.

The other case was an erysipelatous affection of the scalp, where the application of the cautery was equally advantageous. (*Revue Med.*)

15. *Extirpation of the Neck of the Uterus.*—M. LISFRANC gave an account, at a late meeting of the Royal Academy of Medicine, of a case in which he had lately performed the above operation. The part was greatly tumefied, and in a carcinomatous condition. Hemorrhage, not sufficiently violent to call for any extraordinary measures, persisted for some days, and probably prevented the occurrence of any other accidents. The woman is, in fact, in complete convalescence. (*Archives Generales.*)

CHEMISTRY.

16. *Test of the Presence of Organic Exhalations in the Atmosphere.*—Il Signor BIZIO having noticed the powerful effect exerted by anhydrous sulphuric acid in vapour over organic exhalations in the air, and the consequent production of black carbonaceous spots, has proposed the use of it for this purpose, and has dignified a little glass instrument, in which a portion of air is exposed to the vapours of the acid, by the name of the *diaftoroscopio*. He states that he has experimented frequently with the air of his laboratory, but never found it free from these kinds of exhalations.

By putting different substances into the air operated upon,—as, for instance, putrid matter, alcohol, essential oils, camphor, ether, odorous resins, &c.—a saturated atmosphere was procured, and results, in some degree comparative, obtained. The vapour of alcohol gave the most carbonaceous indication, and after it camphor. Ether gave no indications above that of the air containing it. (*Giornale di Fisica.*)

17. *Preservation of Lemon or Lime Juice.*—Lemon or lime juice, according to the experiments of Captain BAGNOLD, may be preserved without the addition of rum, spirit, or any other substance, by the process well known and practised for the preserving of green gooseberries and other fruits for domestic purposes. Lime juice was expressed from the fruit in Jamaica, in September 1823, strained, put into quart bottles, and carefully corked; these being put into a pan of cold water, were gradually raised to the boiling point; they were retained at that point for half an hour, and then allowed to cool. A bottle opened in April, 1824, was found to contain the juice in the state of a whitish turbid liquor, with the acidity and much of the flavour of the lime, nor did it appear to have undergone any alteration. The same juice, again bottled and heated, was set aside till March, 1825, when, upon exami-

nation, it was found in good condition, retaining much of the flavour of the recent juice. (*Trans. Soc. Arts.*)

MEDICAL POLICE.

18. *On Chemists and Druggists prescribing for Patients.*—An inquest was lately held at Southampton, on the body of a female infant, named Louisa Mags. It appeared that the child had been under the care of Mr. Palk, who was only a druggist, and according to Act of Parliament not entitled to practise; and therefore his attendance could not be considered as that of a medical man. Mr. Keele, a surgeon, who had examined the body, stated that the child had died of general debility; there was no appearance of inflammation or acute disease, excepting in the liver, which was enlarged. The mother of the child had taken it to Mr. Palk, the druggist, who had ordered it some borax for the mouth, with some magnesia and castor oil. She did not apply for farther advice because she thought the medicine given by the druggist would do the child good;—she farther stated, that Mr. Palk did not say there was any danger of the child dying, but, on the contrary, that it would probably live fourteen or fifteen months.

The Coroner, in charging the Jury, made the following observations:—The parents of the child, it appeared, had applied for a parish coffin, which was refused them, (in consequence of the mother having stated that the child had received no medical advice,) till an enquiry had been instituted. He (the Coroner) had received two messages on the subject previous to calling this inquest; and, as he found the child had been attended only by Mr. Palk, he had requested Mr. Keele to open the body. He then directed their attention to the evidence of Mr. Keele, who had stated that the child's disease was hereditary: this he (the Coroner) believed—the ulceration of the mouth shewed it to be so; but Mr. Palk had stated the child's disease to be the thrush. He then pointed out the discrepancy in the evidence of the mother of the child and Mr. Palk. The latter said the child was dying when it was brought to him; but to the mother he gave his opinion directly contrary—he told her the child might live fourteen or fifteen months: this you will consider in returning your verdict. That the child died by the visitation of God there can be no doubt; but the question is, whether the child's life could not have been saved, or at any rate prolonged, and its sufferings mitigated, if it had received proper attention. And here he would observe, that Mr. Palk would have done but justice to the parents, if he had recommended them to take it to a regular practitioner; for it was not to be supposed that Mr. Palk was capable of rendering it that service which it required. Mr. Palk derived his knowledge only from behind a chemist's counter, and has not received sufficient medical education to enable him to undertake this or any other case of a medical nature. He therefore should not be allowed to practise, particularly in cases where men of tried experience, education, and ability, and with which the town abounds, were indispensably necessary, as in the present instance. "I should consider it a dereliction from my duty, as Coroner, if in future I did not institute judicial enquiry upon all cases where a party dies who has not had medical assistance from a

person duly qualified to practise, agreeably to an act of parliament passed in the late king's reign, for the better regulating the practice of apothecaries in England and Wales."

The Jury, after some hesitation, brought in a verdict, "That the deceased died by the visitation of God, but that its death was hastened for the want of earlier and proper medical advice."

Our object in publishing this case is merely to remind our readers of the illegality of chemists and druggists *prescribing*.

MISCELLANEOUS.

19. *Regulations respecting the Medical Studies required for Admission into the Medical Service of the Navy.*

Victualling Office, 23d February, 1826.

The Right Honourable the Lords Commissioners of the Admiralty having been pleased to direct, "that no person be admitted to be a candidate for situation of assistant surgeon in the royal navy, who shall not produce a certificate from one of the Royal Colleges of Surgeons of London, Edinburgh, and Dublin, of his fitness for that office; nor for that of surgeon, unless he shall produce a diploma, or certificate, from one of the said royal colleges, founded on an examination to be passed subsequently to his appointment of assistant surgeon, as to the candidate's fitness for the situation of surgeon in the navy; and that in every case the candidate producing such certificate, or diploma, shall also undergo a further examination before the medical commissioners of the Victualling Board, touching his qualifications in all the necessary branches and points of medicine and surgery for each of the steps in the naval medical service;" the Commissioners for victualling his Majesty's Navy, &c., do hereby signify, for the information of those persons to whom it may relate, that these regulations and directions will be strictly adhered to in future; and further, that previously to the admission of assistant surgeons into the navy, it will be required that they should have received a classical education, and possess in particular a competent knowledge of Latin; also,

That they should have served an apprenticeship, or have been employed in an apothecary's shop for not less than two years.

That their age should not be less than twenty years, nor more than twenty-six years.

That they should have attended an hospital in London, Edinburgh, Dublin, or Glasgow, for twelve months; and

That they should have attended lectures, &c. on the following subjects, for periods not less than hereunder stated, viz.

Anatomy	.	.	.	18 months.
Surgery	.	.	.	18 ditto.
Theory of medicine	.	.	.	12 ditto.
Practice of ditto	.	.	.	12 ditto.
Chemistry	.	.	.	6 ditto.
Materia medica	.	.	.	6 ditto.
Midwifery	.	.	.	6 ditto.
Actual dissections of the human body	.	.	.	6 ditto.

Although the above are the only qualifications which are absolutely required in candidates for the appointment of assistant surgeon, a preference will be given to those who, by possessing a knowledge of diseases of the eye, and of any branch of science connected with the profession, such as botany, medical jurisprudence, natural philosophy, &c. appear to be more peculiarly eligible for admission into the service.

It is also to be observed, that, by the rules of the service, no assistant surgeon can be promoted to the rank of surgeon until he shall have served full three years in the former capacity; and the Board have resolved that not any diploma or certificate of examination from either of the aforesaid royal colleges, shall be admitted towards the qualification for surgeon, unless the diploma or certificate shall be obtained on an examination passed after a period of not less than three years' service as assistant surgeon. By command of the Board, &c.

MONTHLY CATALOGUE OF MEDICAL BOOKS.

* * *It having been hinted to us that gentlemen, sending copies of their Works, prefer having their titles given at length, it is our intention, in future, to comply with this suggestion: but it is to be observed, that no books can be entered on this List except those sent to us for the purpose;—finding, in the lists hitherto transmitted, that the names of works have frequently been given as published, which have not appeared for weeks, or even months, after.*

Practical Observations on the Convulsions of Infants. By JOHN NORTH, Surgeon Accoucheur, Member of the Royal College of Surgeons.—London, 1826.

Observations on M. LAENNEC's Method of forming a Diagnosis of the Diseases of the Chest by means of the Stethoscope, and of Percussion; and upon some Points of the French Practice of Medicine. By CHARLES SCUDAMORE, M.D. F.R.S. Member of the Royal College of Physicians in London; Honorary Member of Trinity College, Dublin, &c. &c.—London, 1826.

The Anatomy of the Brain, with a general View of the Nervous System. By G. SPURZHEIM, M.D. of the Universities of Vienna and Paris; Licentiate of the Royal College of Physicians in London. Translated from the unpublished French MS. by R. WILLIS, Member of the Royal College of Surgeons in London. With eleven Plates.—London, 1826.

Doubts of Hydrophobia, as a specific Disease, to be communicated by the Bite of a Dog; with Experiments on the supposed Virus generated in that Animal, during the Complaint termed Madness. By ROBERT WHITE, Surgeon, Brighton.—London, 1826.

Observations on the prevailing Practice of supplying Medical Assistance to the Poor, commonly called the Farming of Parishes; with Suggestions for the Establishment of Parochial Medicine Chests, or Infirmaries in Agricultural Districts.—London.

Thoughts on Medical Education, and a Plan for its Improvement: addressed to the Council of the University of London.—London, 1826.

Remarks on the present State of the Medical Profession, showing chiefly the Necessity for the Division of Labour in its Practice. By LEONARD STEWART, M.D. Licentiate of the Royal College of Physicians, Fellow of the Royal Medical Society of Edinburgh, and Secretary for Foreign Correspondence to the Medical Society of London.—London, 1826.

* * We have received a Plate of the Eye, “engraved by J. STEWART, from a Drawing by A. G. ROWLANDS, after the Plates of ZINN and SOENMERING, and used at Mr. H. MAYO's Lecture-room, Berwick-street.”—It is a splendid engraving.

METEOROLOGICAL JOURNAL,

*From March 20, to April 19, 1826, inclusive.*By Messrs. WILLIAM HARRIS and Co. Mathematical Instrument Makers,
50, Holborn, London.

	MOON.	Rain gauge	THERM.			BAROM.		DE LUC'S HYG.		WIND.		ATMOSPHERIC VARIATIONS.		
			6 A.M.	M.V.	MIN.	9 A.M.	10 P.M.	6 A.M.	10 P.M.	9 A.M.	10 P.M.	9 A.M.	2 P.M.	10 P.M.
Mar.														
20			44	48	36	29.84	29.85	73	74	NW	N	Fine	Fine	Fine
21			45	48	35	29.82	29.82	78	74	NE	NEva.	Fair		Cloud
22			37	44	37	29.69	29.67	76	80	NNE	N	Cloud.		Fine
23	○	.39	40	42	33	29.49	29.34	79	87	N	NE	Fine	Rain	Rain
24			37	40	34	29.38	29.60	80	82	ENE	NE	Cloud.		
25			38	42	34	29.62	29.59	67	76	NE	NE		Fine	Fine
26			32	42	30	29.63	29.80	68	69	NE	NE	Fine	Rain	
27			36	42	34	29.82	29.82	66	61	ENE	SW		Fine	
28			41	49	44	29.72	29.53	68	79	SW	SW			
29			48	49	31	29.47	29.66	73	69	WNW	WNW	Cloud.		
30	☾		39	47	32	29.92	30.10	66	60	WNW	NW	Fine		
31			38	46	34	30.20	30.24	66	68	W	W			
Apr.														
1			39	50	42	30.24	30.13	67	64	W	W			
2			45	52	50	29.99	30.01	66	81	WSW	W	Fair		
3			55	66	45	30.02	30.09	76	75	WNW	NW	Fine		
4			51	58	49	30.05	30.02	80	70	WSW	W			
5			51	57	48	29.98	29.97	74	63	W	WSW			
6			54	60	49	30.10	29.96	76	74	WSW	WSW			
7	☉		54	63	50	29.96	30.06	77	68	W	WSW			
8			56	63	52	30.03	29.86	68	66	W	SW			
9			60	65	42	29.64	29.66	61	80	SSE	WSW		Rain	
10			51	62	49	29.77	29.82	68	74	W	SW		Fine	Fair
11			56	60	46	29.67	29.62	79	72	WSW	SW	Rain	Rain	Rain
12			51	54	45	29.07	29.46	79	75	WSW	WNW			Fair
13		.51	47	57	49	29.95	30.00	70	73	NNW	WSW	Fair	Fine	Fine
14			55	61	50	30.12	30.13	73	74	W	WSW			
15	☾		59	59	50	30.12	30.05	75	73	WSW	W	Fine		Fair
16			54	60	41	30.04	30.13	74	70	NNE	N	Rain		
17			51	54	45	30.15	30.13	63	63	NNW	SSE	Fine		Fine
18			48	58	43	30.05	30.03	68	61	S	SSE	Foggy		
19			56	60	42	29.97	29.89	60	62	SSW	ENE	Fine		

The quantity of rain fallen in the month of March,
was 1 inch and 33.100ths.

NOTICE TO CORRESPONDENTS.

*We beg to inform Dr. VENABLES, that his Paper has been unavoidably postponed, from circumstances connected with the printing, and not dependent upon the Editors.**Dr. STOKES's Communication came to hand too late for the present month.**Dr. LEE's Account of the Scurvy in Russia, and the accompanying Paper, have been received.**The "Clinical Report" in our next.**** We have received the Titles of some Books, with a request to announce their publication. This belongs to the Advertising department, and all such Communications must be forwarded to the Publisher. Books sent to the Editor will always be duly acknowledged in the Monthly List of Publications.*

THE LONDON
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For many fortunate discoveries in medicine, and for the detection of numerous errors, the world is indebted to the rapid circulation of Monthly Journals; and there never existed any work, to which the Faculty, in Europe and America, were under deeper obligations, than to the Medical and Physical Journal of London, now forming a long, but an invaluable, series.—RUSH.

ORIGINAL COMMUNICATIONS,
SELECT OBSERVATIONS, &c.

ART. I.—*On the Pathology of Fever.* By WM. STOKER, M.D.
senior Physician to the Fever Hospital and House of Recovery, Cork-street, Dublin.

THE new doctrines of fever, which I adverted to as a branch of solidism, at the conclusion of my last letter in this Journal,* in as much as they attributed fevers generally to inflammation, or altered structure of some vital part, and suggested blood-letting as their common remedy, were directly opposed in principle to that theoretic division of fevers into idiopathic and symptomatic, which I have ever deemed natural and useful in practice. It therefore became my duty, as physician to the Fever Hospital, to examine the arguments closely on which these doctrines† were promulgated and maintained; more especially as they

* See Number for March 1826, page 183.

† These doctrines, as successively adopted by Drs. Clutterbuck, Armstrong, Mills, and M. Broussais, may be found detailed in the works of each of those authors; and the favourable reception which they generally met with, may be judged of from the Reviews of these works, as they appeared soon after their publication.

That a strong counter current in public opinion has lately commenced, may, I think, be inferred from the tenor of the articles, of late, in many of those Journals where these works were once noticed with approbation. In an able Essay by Dr. Gerson, in the Magazine of Foreign Literature, &c. &c. at Hamburgh, for July and August, 1824,^a it appears that this counter current had commenced earlier, and more remarkably, in Germany than in Great Britain; but, in the first article of the first Number of the new Journal of Medicine, published at Edinburgh in the beginning of the present year, the return to more correct pathological views than have been taken for some time in this country, may be distinctly perceived. On a future occasion, I hope to avail myself of the great increase of

^a “Magazin der Ausländischen Literatur der gesammten Heilkunde, &c. von Dr. G. H. GERSON, und Dr. NICHOL, HENRI JULIUS. Juli, August, 1824.—Art. 2. *Pathological Observations. Part I. on Dropsy, Purpura, and the Influenza of 1822 and 1823, &c. &c.* By WILLIAM STOKER, Dublin, 1824.

were said to have been deduced from actual observation made in the course of diseases, or on the appearances of parts discovered after death.

The process of the examination which I accordingly made, through the opportunities offered to me in the largest and most fully occupied Fever Institution yet established, may be seen detailed in the Reports I published from that Institution, and in a separate Essay on Fever, printed at London in 1814.

In the three earliest of these Reports, evidence was adduced in favour of the division in question, showing, from several hundred cases taken without selection, that the same tendency still continued, in idiopathic and typhoid fevers, to terminate favourably or fatally on certain critical days, as had been observed to characterise them by Hippocrates.* And, in my Report for the year 1811, I added facts to prove that fevers, subject to such periodical revolutions, were frequently the consequence of exposure to contagion or infection.

The Appendix† to my Essay on Fever, however, contains the result of a trial of the merits of these doctrines, which promised to contribute more to a satisfactory decision of the question than any of the previous investigations, both on account of the extent of the comparison instituted between the opposed modes of treatment, and the faithfulness of the records from which it was deduced. But, previously to the brief extracts from this document, showing the result which I intend to add, I should observe, that, after much reflection on the subject, I feel convinced that if, in making this comparison, all those mixed cases of typhous and inflammatory fevers, in which blood-letting may have been too cautiously withheld on the one hand, and, on the other, all of the same kind, or those of actual inflammation, in which that remedy must have been beneficially employed, could be separated, the results of the numerical calculations would have been much more decisively against the

information which I have derived from Dr. Gerson's Essay; and must regret that, for the present, I must confine myself to the expression of my satisfaction that my work on Dropsy has been deemed worthy of so much of his attention. But, however I may wish to conciliate further his favourable opinion, I beg to explain that my views in that work were intended not by any means to overturn the pathology deduced from altered structure, but to relate facts which might suggest certain additions from the too generally exploded humoral pathology, that would render the systems now in vogue more perfect. And, though I hail the proof given in the new *Journal of Medicine and Surgery of Edinburgh*, by Dr. Brown, of the return of public opinion to sounder pathology, yet I cannot perceive with satisfaction that my humble, but constant, efforts in support of these tenets which he now upholds, have been unnoticed by him.

* See Collections, &c. &c. on the Effects of Sol-Lunar Influence in Fevers, by FRANCIS BALFOUR, M.D. &c. &c.—London, 1816. *Preface*, page 8, 9, 10.

† See Extract of Letter from the Physicians of the Fever Hospital, &c. Cork-street, to the Managing Committee.

practice in purely typhoid fevers, than they now appear. For Dr. Mills, then one of my colleagues, who, though he had previously much experience in the treatment of fever, adopted Dr. Clutterbuck's views, with certain modifications, and practical blood-letting, in a very large proportion of cases,—at times nearly with all his patients, in the Cork-street Hospital. But, by the other physicians, that remedy was rarely employed, and the estimate of the value of repeated blood-letting in fever indiscriminately, compared with other modes of practice, (modified as just now suggested,*) still further confirmed my previous opinions. I feel it due, however, to Dr. Mills to add, that, previous to his publication on the subject, I would not have ventured on general blood-letting in mixed cases of inflammatory and typhoid fevers, to the extent which I have employed it since, (sometimes with advantage,) for the relief of coexisting or supervening symptoms of inflammation. It appears, however, from the document just referred to as “the final result, that, among the patients treated by blood-letting, the proportion of deaths to recoveries was as one to $11\frac{4}{3}$; and among those treated according to the more ordinary methods, as one to $12\frac{1}{10}$; a proportion differing from the former in no small degree, and justifying the conclusion that the treatment of fever by small and repeated general detractions of blood, is either of little efficacy or injurious.”

Dr. Mills's patients have remained in the hospital, on an average, $16\frac{2}{3}$ days; the patients of the other physicians, $17\frac{2}{3}$ days; a difference very slight, and, though apparently in favour of blood-letting, yet most probably arising, not from this practice, but from Dr. Mills having under his care a much larger proportion of male patients than the other physicians; “and these patients, from obvious reasons, are less disposed than the females to remain unnecessarily in the hospital after their recovery.”†

The following appears to me to be a very natural division of continued fevers, being simple and applicable to practical purposes:—1st, Idiopathic fevers, comprehending those of spontaneous and contagious origin; 2d, inflammatory fevers; and, lastly, those in which two kinds coexist or mingle together; a division, though sanctioned by the first nosological authorities, by no means unobjectionable, but adopted here for the reasons already assigned, being a more comprehensible part of the labyrinth in which a medical observer is involved by the theories of every age, to whom we may generally apply what Hippocrates

* See Dr. BROWN's Essay on the Controlling Power of Remedies in Fever.—Edinburgh, 1815.

† See Treatise on Fever, published at London by me in the year 1815; page 193 and 4.

said of the lectures of his day, "*Unusquisque suæ orationi testimonia, et conjecturas addit,—vincit hic, modo ille, modo iste, cui potissimum lingua volubilis ad populum contigerit.*" From such perplexity the medical prescriber can only pass securely by constant attention to the phenomena of nature."

The cases admitted into this hospital belong, in general, to either of the first or third parts of this division; their relative proportions varying much at different seasons of the year, and in different epidemics. Cases belonging to the second part also occasionally get admission, (though not strictly those for whom the institution was intended;) it being sometimes advisable to remove persons labouring under inflammatory, and even other diseases, from situations where they are exposed to all the circumstances favourable to the generation of fever and of contagion.

The characteristics of the first class of fevers, very generally, are sudden prostration of strength; failure of mental and bodily power; suspension or disorder of the secretions; irregular vascular and pulmonary action, producing both inequality in the distribution of blood and of temperature in different parts of the system, and an uniform tendency to perform a certain succession of salutary or morbid changes, in definite periods. The distinguishing features and local origin of the second class, or inflammatory fevers, are well marked and generally known; but, when their symptoms mingle, in epidemics, with those of typhoid or idiopathic fevers, the importance is commensurate with the difficulty of ascertaining their relative degrees, so as safely to decide on the means to be employed.

The opinions on which this division rests, that typhus and synochus are not essentially inflammatory, but that, in their simple forms, they are diseases of debility through their whole course; and that the excitement, so observable in their early stages, is constitutional reaction, accord with my experience.

Morbid anatomy, therefore, does not appear to me to warrant the conclusions which those who hold the opinion of typhous fever being an essentially inflammatory disease, have deduced from it. I have in some instances observed the same partial turgescence of vessels which they report, and likewise signs of inflammatory action in various parts of the bodies of those who died of fever: the former, however, I believe, is by no means a mark of previous inflammation; and I could generally trace the commencement of inflammatory action, which produced the latter appearance, to local disease, which preceded or supervened on fever, sometimes at late stages; but in several cases, where I had witnessed the highest degree of febrile excitement before death, no such signs of turgescence, or of inflammation, were observable on dissection.

In support of the foregoing statements, I was happy to be able to add, in the same Report, the highly respectable testimony which Mr. Kirby's answers to my queries on the subject enabled me to bring forward. Besides the unquestionable qualifications of so accomplished an anatomist, and his numerous opportunities for examining the bodies brought to his theatre for dissection, his opinion, as expressed in the following extract from his letter, had the peculiar advantage of being deduced from observations that were not influenced by preconceived theory, or by cases selected for particular views.

"In the midst," he says, "of all the discussions relative to topical congestion, it was impossible, however, not to remark the singular want of accordance between the prevalent opinions and local appearances. The brain, so constantly supposed to be the seat of inflammation, rarely exhibited the characters indicative of such a state. In some instances, this organ was much paler than usual; in a very few, amongst a great number of dissections, was there any evidence of sanguineous or serous effusion." And, after recounting his observations on all the other vital organs, he thus concludes:—"In short, in a great majority of cases, so little did any particular organ seem to suffer, that I have wondered what could have been the cause of death."

With the foregoing statement, the answers of Dr. Macartney, anatomical professor of Trinity College, Dublin, to queries of Dr. Barker on the same subject, are coincident, and appear to me further to corroborate the opinions that typhous and inflammatory fevers are distinct. I may, therefore, be allowed to add the following extract from Dr. Barker's Report for the years 1817 and 18, as published in the second volume of *Transactions of the Irish College of Physicians*, page 574.

"He (Dr. Macartney) informs me, that, 'having reviewed his notes on the anatomical examination of persons who have died of typhous fever, he can state, as the result of his experience, that morbid appearances in typhous fever are not those of common visceral inflammation;' and, having stated more fully the actual observations on which this opinion was founded, he concludes thus:—

"'Two facts deserve to be recollected:—1st. That the duration of general fever and visceral inflammation are not the same; 2d. That internal inflammations are very common in hot-blooded animals, but idiopathic fever is peculiar to the human kind.' It may be added, that processes of an inflammatory nature are fitted for repairing parts that have their functions interrupted or their structure injured; but the effects of typhous fever have no such power."

Thus far the evidence which I have adduced and referred to

in the foregoing extracts, has chiefly regarded negative proof that signs of inflammation are not uniformly or generally found on minute dissection of those who die of typhous fever, as asserted by those who attribute it to inflammation;—extracts which I would willingly extend, in order to describe more fully the process by which I have endeavoured to come to a right decision on a question, which I believe involves the health and lives of mankind more than any other science; and by stating, as far as my prescribed limits admit, all the circumstances of the case, I wish to enable others to exercise their own judgment, when called on to return a verdict so fearfully important to their fellows.

In tracing the further steps of my inquiries, I mean to illustrate my opinions by extracts from my previous publications, tending to show not only that fever is not essentially derived from disorganisation of the solids, but that its cause, as well as the alterations of structure, may be often traced to originate in the blood, or in the fluids from which it is derived.

With such views, I stated, in my Report for 1820 and 1821, the remarkable coincidence found between the symptoms and appearances after death of the fatal cases which occurred in 1818, when famine excited an extraordinary degree of fever in this country, and those poisonous effects related by Dr. Kerner, to have followed the use of certain unwholesome animal substances at Wirtemburgh;* and I shall repeat the extract I then gave from his work, premising that he also found the whole system of the ganglionic and cerebral nerves generally affected; a circumstance so frequently observed by Dr. Robert Reid, in the dissections of those bodies he examined after death from the fever of 1818, that he supposed that system to be the chief seat of the disease. The similitude between the symptoms to those fatal cases will, I think, be readily recognised by the experienced; and I am, therefore, induced to give the following extract from Dr. Kerner's publication.

“The symptoms of poisoning commonly commence twenty-four hours after the ingestion of the aliment, rarely sooner, and sometimes later: a severe burning pain is then felt in the epigastrium, and vomiting of the sanguineous matter occurs from time to time; the eyes then become fixed, the lids immovable; the pupils are dilated, and remain insensible to the action of light; the patient sees double; the voice is affected, and there is often aphonia, more or less complete; respiration is

* *Nouvelles Observations sur les Empoisonnements Mortels, qui arrivent si souvent dans le Wirtemberg, par l'usage des Boudins fumés. Par le Dr. KENER.—Tubingen, 1820. 12 Morn.*

impeded; the beating of the heart cannot be felt; there is frequent syncope; the pulse is weaker than natural; the veins of the neck are dilated and prominent; deglutition is extremely difficult, fluids fall into the stomach as into an empty vessel; solid food remains in the œsophagus; all secretion seems suspended. There is an obstinate constipation, or the excreted matters are hard and dry, earthy, and not tinged with bile. The intellectual faculties remain perfect. In some instances the patient becomes irascible; rarely is there insomnia; the appetite often remains; the thirst is great; the integuments insensible; the patient scarcely perceives the impressions of heat and cold; the palm of the hand is hard and coriaceous; the skin, in general, is cold and dry; it is impossible to restore transpiration. Urine is copious; its excretion difficult. The motions are slow from the syncope, which threatens the patient on the slightest effort; but there is no fatigue in the muscles of the back or loins. When death follows, it is at the end of from three to eight days: respiration becomes impeded; the voice is lost; the pulse sinks; and life ceases sometimes after slight convulsive motions, the patient having retained his faculties to the last. In case of recovery, convalescence is very long; a sort of exfoliation often occurs from the mucous membranes. The symptoms vary in different cases, and some are occasionally observed, of which we have not spoken,—as diarrhœa, hydrophobia, delirium, vertigo, atrophy of the testes, &c.”

Within the last six, but still more remarkably within the last three years, the many cases of the most exquisite forms of typhous fever, that have succeeded punctures received in dissection, at the various schools of anatomy in London, Dublin, and Edinburgh, have clearly depended on a specific virus introduced through the medium of the animal fluids. I accordingly adverted (in a former Number of this Journal) to facts affording conclusive evidence in favour of the pathology of fever I have adopted. On that occasion, I also attempted to show the analogy between these unfortunate cases, both as to their symptoms and successful treatment, and those of typhus gravior, which have been of late received into the Fever Hospital in Cork-street.

I must not delay longer to enter on the description of the epidemic that committed such havoc on all ranks of our population in the last three years, and by which I proposed to illustrate my pathology of fever, by showing the remarkable coincidence which occurred, during that period, between the intensity of the symptoms of disease and that of the altered condition of the animal fluids. I may be allowed to commence the description with the following extracts from my Report of 1823, which

also respect the objects aimed at in those already taken from my Reports of preceding years.

“It may be said, however, that, although dissections may have thus demonstrated that altered structure of parts, or traces of previous inflammation, were not always to be found on examination of the bodies of those who had died of typhous fever, and therefore were not to be deemed its essential characteristics, yet that neither have they established that the fluids are the seat of that disease, or of its being the consequence of changes which primarily took place in them, as implied in the general division of the subject that I have adopted.

In vitium ducit culpæ fuga, si caret arte.

“The statements of modern pathologists having been the only plea for setting aside the opinions held by the highest medical authorities from the earliest ages, and down to the very last, with respect to the seat and origin of typhoid pestilential fevers, I deemed it necessary to notice the results of those anatomical researches to which such statements referred, previously to entering on a brief consideration of the nature and seat of the contagious fever of this country, especially under these pestilential characteristics which have designated them within the last year, with a view to inquire how far the principles inculcated by Hippocrates, Sydenham, Meade, and Boerhaave, when treating of pestilential fever at successive periods, are applicable to that which is the immediate object of inquiry.

“The opinion, however, that the animal fluids are primarily and chiefly affected in typhoid fevers by the generation or introduction of some poison, has not been adopted by me solely on authority, or from the analogies just alluded to; but has been the result of the extensive observations on fever which I have had an opportunity of making, as well in this hospital as in private practice, and from having, in different seasons, when pestilential fever prevailed, witnessed those cutaneous eruptions, internal and external hemorrhoidal gangrenes, and even those glandular swellings, by which such fevers, in their most exquisite forms, are characterised. In mixed cases, too, in which the paramount urgency of the inflammatory affection demanded bleeding, as sometimes happens, I have frequently noticed morbid alterations in the appearance of the blood drawn, totally different from that which is supposed to be the effect of inflammation. On the contrary, the crassamentum was imperfectly and loosely coagulated or broken down, the livid fragments mingling in colour as well as in consistence with the opaque, sometimes green or yellow, serum or sanies in which they floated.”

“ During the rise and progress of the constitutio epidemica that has prevailed in this country now nearly fifteen months, giving to almost all febrile diseases an unusually pestilential character, I witnessed, while examining the blood drawn in different diseases with a view to a particular object, that remarkable changes took place, as the simple fever which accompanied the influenza assumed either a remittent or typhoid character; or, I would prefer saying, as the blood was affected either by successive derangements of its morbid condition excited in the mephitic effects of contagious miasmata: and as such facts appear to me highly corroborative of the opinion now under consideration, I may be excused for treating them somewhat further in detail.

“ In the first or catarrhal stage of this epidemic, the blood drawn was generally found of a lighter colour and less consistence than in health, the crassamentum being imperfectly separated. At later stages, the viscera, particularly the lungs and liver, were more frequently engaged. In such cases, the blood drawn was generally buffed; the tunic covering that taken in pulmonary complaints being superficial, cupped, and white; but the buffy coat on blood taken in hepatic complaints was much thicker, darker coloured, and of an even surface.*

“ As the epidemic advanced, the cases of fever more generally wore the characteristics of pestilence: such were the worst forms of cutaneous eruptions, purpura (dark and extensive), external and internal hemorrhages, fetid exhalations, and offensive stench from the alvine discharges. The blood, whether accidentally effused or drawn for the relief of some local congestion, was always found morbidly changed, and, in proportion to the urgency of the foregoing symptoms, dissolved and discoloured, as already mentioned. These observations will be further illustrated by the cases noted in the different stages of the epidemic.

“ Being fully persuaded, from such observations, that the nature of that epidemic constitution by which diseases at certain seasons are rendered more rife, and some of them more pestilential, are chiefly to be explained by the pernicious influence of certain conditions of the atmosphere on the animal fluids, particularly on the blood itself, I am the more desirous to record them for the consideration of others.†”

Before I advance further into the description of the epidemic of the last three years, I shall here introduce a Table, which

* See Pathological Observations on Dropsy, Purpura, &c.—Dublin, 1823. Page 40—42.

† See my Report of the Fever Hospital and House of Recovery, Cork-street, for 1823; and Tables of the Weather and Admissions, between page 16 and 17 of that Report.

will contrast its extraordinary urgency during this period with its progressive increase during the twenty years preceding, and exhibit the proportion of that increase. This table is similar to those prefixed to my Reports of the Fever Hospital and House of Recovery in Cork-street: as on its columns are inscribed the number of patients admitted, the number of deaths, the average mortality at that institution since it was founded; and, for reasons stated on other occasions, I believe it affords as accurate a scale of the increase of fever, and its severity, in this metropolis, as is possible, without taking into account the vast number of those who would not apply to charitable institutions for relief from this calamity, and of those who were received into the other extensive Fever Hospitals in Dublin. It appears, by this table, that 10,764 patients were admitted in the three years in question, of whom 1,001 died,—a mortality of one in $10\frac{754}{1001}$; and that, in nineteen preceding years, the whole number admitted was 46,561, of whom 2,869 died, giving a mortality of one in $16\frac{607}{2869}$: a fact which cannot fail to excite deep interest respecting the details of the course of the epidemic since the commencement of 1823, and justify my attempt to lay them before the public. These details, however, I find must be again de-

Years.	Admitted.	Died.	Average.
1804	415	29	1 in $14\frac{9}{29}$
1805	1024	67	1 in $15\frac{19}{67}$
1806	1264	103	1 in $12\frac{28}{103}$
1807	1100	92	1 in $11\frac{88}{92}$
1808	1071	94	1 in $11\frac{37}{94}$
1809	1051	83	1 in $12\frac{65}{83}$
1810	1774	154	1 in $11\frac{40}{77}$
1811	1472	115	1 in $12\frac{91}{115}$
1812	2265	166	1 in $13\frac{107}{166}$
1813	2627	164	1 in $16\frac{3}{164}$
1814	2329	143	1 in $16\frac{104}{143}$
1815	3789	187	1 in $20\frac{49}{178}$
1816	2763	173	1 in $15\frac{168}{173}$
1817	3682	231	1 in $15\frac{217}{231}$
1818	7608	258	1 in $30\frac{126}{258}$
1819	3873	224	1 in $17\frac{134}{224}$
1820	2974	203	1 in $14\frac{132}{203}$
1821	2973	246	1 in $12\frac{76}{246}$
1822	2307	137	1 in $16\frac{124}{137}$
Total.....	46,561	2869	1 in $16\frac{657}{2869}$
1823	2668	241	1 in $11\frac{17}{241}$
1824	4599	327	1 in $12\frac{44}{327}$
1825	3878	381	1 in $10\frac{68}{381}$
Total for these 3 years	10,764	1001	1 in $10\frac{754}{1001}$

ferred to another letter, as the general observations which I feel called on to make respecting the whole period embraced by this table will extend as far as the limits usually allowed to articles for the Journal.

Instructive as the facts which this table presents must be to physicians, they should be no less interesting to the political economist; for he may observe, as my occupations have obliged me to do, that this monstrous growth of disease, and also the fearful increase of its severity, have been advancing in measured step with poverty and demoralisation; and that these are excessive only there where the people have nothing to do, or where they want gainful employment. With great justice have writers on the epidemics of this country adverted to many other concurring causes; but, surely, from the uniformity of the phenomena, indicating a corresponding uniformity in the cause, we should chiefly look to that which has coexisted with both. Before now I have had occasion to observe with what direful rapidity disease has advanced, when attended by that wretchedness of both mind and body which want of employment must necessarily beget; and often has it been a subject of amazement to me, that inventions which curtail manual labour, and thus must have deplorably increased that want of employment, should not have been esteemed a chief source of misery in a country whose poverty is so great that she cannot with advantage export, and whose population is so dense that the cultivation of all her natural resources would be necessary to give sufficient occupation to the inhabitants.

I anxiously wish that public attention would turn to the growth of those national evils which have been so direfully remarkable of late years, and more especially as the consistency of my humble evidence might be questioned, because Parliament have been pleased to bestow so little notice upon these evils, so remarkably urgent at the time of the late inquiries into the state of Ireland. It is not for me to conjecture why such subjects were not embraced in these inquiries; but I would be glad that politicians would, in this instance at least, stoop to a suggestion which the practice of medicine affords; as when the physician, finding his treatment unsuccessful, because ill-conceived, retraces his former steps, that he may find the point at which he erred, and thus brought back to the consideration of the true origin and nature of diseases, is taught, by his former mistakes, more effectually to prescribe for them.

For the removal or alleviation of febrile diseases, there has been erected the Fever Hospital and House of Recovery in Cork-street, which has internal and external accommodation of unprecedented extent for the cure of the sick, separate from their supposed infected dwellings, and for the destruction of

contagious fomites. Besides this, there are other extensive hospitals through the city for like purposes; whilst, by widening the streets, ventilating, cleansing, and whitewashing the apartments of the poor, and by giving them plentiful supplies of water by fountains erected at their very doors, it was expected that the other causes, which were supposed to concur in producing the calamities in question, might be modified, if not removed; and yet it is too apparent that the source has not been stopped, but that, on the contrary, its produce has greatly exceeded all former bounds, and its effects been even more pernicious than before.

York-street; April 21, 1826.

ART. II.—*Case of Uterine Hemorrhage, successfully treated by the Operation of Transfusion.* By C. WALLER, Esq.

TRUTH in science, like truth in religion, thrives by persecution. The proposers of the operation of transfusion have to thank its opponents for many of the converts it has already made; for the senseless hue-and-cry which has been raised against it has done more towards directing the attention of the profession to this subject, than all that we could have said or written in its favour; so true is the old adage—"Magna est veritas, et prevalebit." Such an impulse has been given to the operation, that I feel confident a fair trial will now be afforded it; and, if it be founded in *truth*, which I have good reason to suppose it is, neither the assertions, the sneers, nor the innuendoes of men who have not candour enough to recommend an improvement which they have not suggested themselves, will be able to stop its progress.

Every new remedy ought to be subjected to a full, free, and dispassionate examination, before it be admitted into general practice: but has this been done in the present instance? I answer, no: the opposition to it has not been carried on in that spirit of scientific inquiry which ought to characterise the members of a learned and a liberal profession. Most of the objectors have artfully and adroitly evaded the question altogether, contenting themselves with giving their opinion on the cases adduced, leaving the *principle* of the operation untouched. Now, is it consistent with reason and common sense to suppose that men who did not see the patients could give a more correct opinion than those who were present?—some of them, too, according to their own confession, who have *never had an opportunity of witnessing a case of a similar nature!* But granting, for the sake of argument, that it is so, still the grand question to be determined by the profession at large, is not whether these

particular patients would have survived without the transfusion? but whether it *is*, or is *not*, a remedy that is calculated to be of service in cases *otherwise desperate*? That uterine hemorrhagies do every now and then prove destructive to life, none, I conceive, will have the hardihood to deny; and who, I would ask, is so likely to form a correct judgment of the probable termination of such cases as the practitioner in attendance.

Medical evidence is in its nature presumptive; it cannot be positive; and therefore, when patients recover under any particular treatment, it is quite impossible to prove to demonstration that they would have lost their lives if a different plan had been adopted. This, it is quite clear, will apply *generally*, and not to any particular cases. The language of our opponents is, in effect, this: "It is true your patients were excessively exhausted, but still it is possible they *might* have recovered if no operation had been performed. If you will only just let one of them *die*, and then recover her, we will believe you."

A great deal has been said about the *danger* of the operation, but we have no facts brought forward to prove it; whilst, on the contrary, the cases which have already occurred are sufficient to warrant an assertion that it, at any rate, is not necessarily attended with danger. But, like any other operation in surgery, it may be made a dangerous one in the hands of ignorance and inexperience; for, although it requires but a very moderate portion of skill, yet there are several *niceties* (if I may so express myself,) which are essentially necessary to be attended to, to ensure the success of the operation.

In the case which I am about to relate, the patient appeared to be as near death as it was possible for any one to be, without being actually dead.

The female was thirty-two years of age, of a very delicate and nervous habit, was exceedingly emaciated, and was so reduced by long-continued nausea and vomiting, that she had been for three weeks confined to her bed, and during the last ten days she could not even turn without assistance. I was summoned to her on the morning of the 24th April, and arrived at her house at a quarter before ten A.M., and was informed that she had experienced a few slight pains since three o'clock; that there had been a continual drain since that time, but latterly the discharge had increased: it had, in fact, run through the bed upon the floor. The patient was in a very alarming state; the pulse was only perceptible at intervals, and, when it was so, the beat was too indistinct to be accurately counted: it was, however, extremely rapid, about 140 in the minute. Both the upper and lower extremities were very cold, and she could scarcely answer any question that was put to her; her countenance exhibited that death-like appearance which it is impossible

to describe, but which most of your readers must have witnessed in patients who are on the point of death. On examination, I found the hemorrhage profuse, the promontory of the sacrum rather advanced, and no part of the child below the brim of the pelvis: I therefore introduced the whole hand into the vagina, and ascertained the shoulder to be the presenting part. In such an alarming state of syncope did she appear, that I had my doubts whether the sudden emptying of the uterus would not destroy life. Finding, however, that the stimulus of the hand produced some slight uterine action, I was encouraged to proceed with the delivery, (two or three tea-spoonsful of brandy having been given her.) Under existing circumstances, there was no difficulty in turning the child, but the projecting promontory of the sacrum opposed a little resistance to the passage of the head. The placenta followed almost immediately, and the hemorrhage ceased.

The symptoms, however, of collapse were by no means relieved. The yolk of an egg was beaten up with brandy, and a small quantity given from time to time; but it failed in producing even a temporary rally. There was the high respiration in a most remarkable degree; the pulse conveyed a very feeble and fluttering sensation to the finger; the coldness of the surface was increasing, and there was a distressing state of restlessness. After waiting about three-quarters of an hour, it was very evident that we were losing ground, and I therefore determined on performing the operation of transfusion, aided by my friend Mr. Doubleday.

An obstacle, however, presented itself: the woman who had promised to supply us with blood now refused, and I had therefore to seek for some one else. After the lapse of half an hour, I returned, and found that during my absence the symptoms had been progressively increasing, and she was then in such a desperate state of exhaustion, that I must confess I scarcely conceived it possible for any thing to save her, though I determined to make the attempt.

A vein was opened in the arm of a gentleman, who kindly volunteered his blood on the occasion, and the operation was performed in the usual manner. I may mention in this place, (as we afterwards ascertained from the patient,) that at this period she could neither see, hear, nor speak; nor did she appear to feel, for, although she was naturally remarkably sensible to pain, there was no flinching when the integuments were cut through; neither had she the slightest idea of what we were about.

The first injection (thirteen drachms in quantity) produced no improvement in the pulse, beyond a temporary rally, (this, however, the brandy had failed in doing,) rendering it for a

time rather more perceptible; but it is a remarkable fact, that from this time the restlessness ceased.

After waiting about five minutes, the injection was repeated (thirteen drachms), and it had the effect of rendering the pulse a little more perceptible, though not to any great extent.

In another five minutes, one ounce and a half was injected: the pulse now became tangible, beating at the rate of 124 strokes in the minute. She, however, still felt very cold; there was the high respiration, with occasional sighing; the aspect of the lips was rather improved.

In about five minutes more, fifteen drachms were injected: the pulse became a little more hurried after this injection, (140 in the minute,) but was still more perceptible; the respiration became for a few seconds a little more laborious. Her breathing was also rather stertorous, appearing as if she were in a dose; for this symptom went off if she was roused. She could at this time answer any question that was put to her.

The blood now flowed slowly from the arm of the gentleman who was supplying me: I consequently did not like to throw any more in, but had recourse to the arm of my own nephew, a healthy youth about fourteen years of age, whom I had taken with me for the purpose, and injected another fifteen drachms.* After this injection, there was a most decided improvement; the pulse became firmer, (130 in the minute,) the countenance improved in appearance, and the warmth was returning. In consequence of my washing the syringe with water that was too hot, the valve became imperfect; and I was on that account obliged to desist, which I regretted exceedingly; for, although I was quite satisfied that her improvement was sufficient to remove any apprehension of her dying from the *immediate* effects of the hemorrhage, yet, from her previously exhausted condition, and from the irritable state of the stomach, which I feared would prevent the introduction of the necessary supply of nourishment, I should have considered her ultimate recovery more certainly secured by one or two more injections, although the quantity of blood injected (eight and a half ounces) was twice as much as was employed in my first patient.† The operation finished about one o'clock, and in about an hour afterwards I left her.

In this case it is to be observed, that the introduction of the blood did not produce any temporary symptoms of distress; and this, I apprehend, was owing to the extreme slowness with which I injected it; for, from some experiments I have lately

* It should, perhaps, be mentioned that about half an hour elapsed between this and the preceding injection.

† Vide this Journal for October, 1825.

assisted in making, I am led to infer that the sudden and forcible injection of the blood will create some unpleasant symptoms, and may, when the animal is exceedingly exhausted, extinguish the heart's action altogether, if the quantity thus forcibly injected be large.

I have before stated, that the patient had been from time to time supplied with small quantities of yolk of egg, with brandy: a little before I left the house, the whole of this was rejected from the stomach, just in the same state that it had been swallowed; it had not been acted upon in the slightest degree. This circumstance confirms my opinion that, in these *very extreme cases*, nourishment is but of little use, as the stomach does not possess the power of assimilating it.

Eight P.M.—There is a very comfortable warmth over the whole surface of the body; pulse 140, regular, though small; her countenance is cheerful; tongue clean and moist, but her stomach so irritable that she has not kept any thing on it excepting the effervescing draught. Complains of pain in the course of the vein, which was instantly relieved by loosening the plaster, which had been bound round her arm rather tightly.

Ten P.M.—Much in the same state; arm quite easy; complains of a little uterine pain.

I shall not enter into the tedious detail of every-day symptoms. I have the satisfaction of saying that the stomach became more settled after the first twenty-four hours. The pulse, for three days, ranged from 130 to 140, but there was no other alarming symptom; and, although there were several occurrences tending to retard her recovery, such as a very uncomfortable close room, a noisy house, and a want of proper attendants; yet she was enabled to sit up for about half an hour on the seventh day, and, on my visit this morning, (twelve days after her confinement,) she was sitting up in the bed with her clothes on. Her pulse remains pretty steadily at 100, and she is enabled to take a tolerable supply of nourishment; and, under all the circumstances of the case, I consider her to be doing remarkably well. She will, I doubt not, be some considerable time before she completely regains her strength, as she was so excessively reduced by illness previous to her confinement. The wound in the arm is nearly healed.

The recovery of this patient under so many discouraging circumstances has been highly gratifying to me, and has still further strengthened my conviction that transfusion of blood in desperate cases of hemorrhage, is not that wild and visionary scheme which some men are so industriously endeavouring to make it appear.

ART. III.—*Case of severe Headache, cured by Purgatives.* By
THOMAS RICHARDS, Surgeon.

As well-authenticated facts are more valuable to the medical practitioner than the most ingenious and exquisitely supported theories,—and as every such fact, if it tend to simplify or elucidate the practice of physic, is worthy of publication,—I have been induced to transmit to you the following case; not because there is any thing at all marvellous in the details, or any *interesting obscurity* in the result, but because it goes far to prove that diseases, apparently obstinate, will often yield to measures comparatively simple in character, and mild, though unerring, in effect. I am further induced to publish this case, as it will serve as a kind of appendix to the very interesting paper communicated by Dr. Granville, and inserted in your Journal for January last, in which we have seen that a very common cause gave origin to a train of symptoms exceedingly stubborn and tormenting.

Miss L—A—, aged twenty, had been labouring for some time under distressing and obstinate headache, occasionally increasing to such a degree as to render her almost frantic. To remedy her sufferings, she had recourse to leeches, with occasional doses of aperient medicine, from which she experienced only a trifling and temporary relief. As the disease seemed to gain ground upon her, she requested my attendance, and I saw her on Wednesday, the 26th of April. I found her with the following symptoms:—She complained of great pain and a sense of intolerable weight over the upper and fore part of the head, with a preponderance of both to the right side. Her eyes were considerably suffused; there was great intolerance of light and noise, with excessive languor and debility of the whole frame. The tongue was moist, and coated with mucus; and the pulse very feeble, and from fifty to fifty-four in the minute. Her feet and hands were exceedingly cold, and she had for some time been affected with a very languid circulation in the extremities; her legs and feet being covered with purple patches, with œdema of the ankles. Catamenia irregular.

As I had attended this patient before, I had reason to know that her habits were sedentary, and that the general state of her bowels was torpid: with the view, therefore, of obviating the ill effects of constipation, I had long since prescribed some aperient pills, composed of extract of colocynth and gamboge, with which I had always been led to believe she had preserved a sufficient degree of laxity of the bowels. At all events, she had taken a dose of aperient medicine that morning, which had acted freely.

Convinced, as well from my previous knowledge of her habits and constitution, as from the character of the present symptoms, that the affection of the head was not the primary disease, I felt perfectly satisfied that there was no organic injury in the brain; but, with a view to obviate any unpleasant consequences, I prescribed the application of eight leeches to the right temple, and administered a warm stomachic mixture.

The next day (Thursday,) there was no abatement of the symptoms: the headache had not been relieved by the leeches, nor had the pulse assumed a different character; the tongue was still coated, and there was the same intolerance of light and noise. Turning my attention to what I now considered the origin of all this mischief, I prescribed

R. Hydrarg. submuriatis, gr. iij.

Extr. colocynth. c. gr. x. fiant pilulæ ij. h. s.s.

Continuatur mistura.

Friday.—The pills had produced two or three evacuations of dark, offensive scybalous matter, but the patient's sufferings were unmitigated.—Continuantur pilulæ et mistura.

Saturday.—Symptoms unaltered. Discharge from the bowels copious, dark coloured, offensive, and scybalous.—Continuantur medicamenta.

Sunday.—We now began to feel our way more distinctly. The pulse had become expanded, and risen to sixty-six; there was more warmth of the extremities, and less suffusion of the eyes; the bowels had acted very freely, and discharged the same offensive matter: still the headache was quite as urgent. I therefore repeated the application of the leeches to the temple, and prescribed—R. Elaterii, gr. $\frac{1}{4}$.

Hydr. submuriat. gr. ij.

Pulver. jalapæ, gr. x. fiat pulvis cras mane sumendus.—The mixture to be continued as before.

Monday.—A considerable degree of excitement had been produced in the system by the opening medicine, which produced, however, several copious evacuations, of the same character as those above mentioned; but the original symptoms were not affected by its operation. The general languor and debility were very distressing, and the headache exceedingly severe. I now applied a blister to the back of the neck, and ordered—R. Hydr. submur. Pulv. antimonialis, āā gr. iij.

Extr. colocynth. c. gr. vj. fiant pilulæ ij. h. s.s.

Tuesday.—The pills had operated freely, and, for the first time since I had seen the patient, the headache was better; the pulse was more free and regular, and the countenance more expressive of freedom from suffering than I had yet observed it. The extremities also were warmer, and altogether there was a decided amendment. I now steadily and firmly pursued the

purgative plan, and found the patient's sufferings daily diminishing under its influence. So rapidly did she now improve, that, on the thirteenth day after that on which I was consulted, she had regained her accustomed spirits, and a considerable portion of her former strength; she was entirely free from pain, and sufficiently strong to leave town for the neighbourhood of Chatham, where she intends to remain for a few days.

This case, I think, is particularly worthy of the attention of the young practitioner; for it will give him confidence in a remedy, the effect of which, although not instantly obvious, was nevertheless eventually certain, and a persistence in which, in the present instance, was, at first, indicated only by the characteristic appearance of the feculæ discharged from the intestines. It will teach him, moreover, the absolute necessity, in all obscure and indefinite cases, to trust to nothing but his own ocular examination of the patient's evacuations; and it will show him, also, the truth and practical utility of Dr. Hamilton's remarks respecting the retention of feculent matter in the bowels; a fact which he will find of the utmost importance to him in his practice, and one which he should always bear in mind.

Charlotte-street, Fitzroy-square; May 11th, 1826.

ART. IV.—*An Account of Scurvy, as it has recently prevailed in some Parts of the Russian Territory.* By — LEE, M.D.

HAVING been engaged, during a year's residence in the Crimea and in the countries on the northern shores of the Black Sea, in collecting information respecting the climate and diseases of these extensive regions, I was much astonished to find that a species of land-scurvy had been prevailing extensively, not only in the hospitals of Nicolaef, Cherson, and Sevastopole, but in the military colonies established from the Dnieper to the Bessambia. In the period of its occurrence, and in many of the leading symptoms, it forcibly recalled to my mind the discussions which took place before a committee of the House of Commons on the scurvy which attacked those confined in the great Penitentiary two years ago. It is also a singular circumstance, mentioned by a Russian medical author, that, in 1786, at the siege of Azoff, a similar malady broke out, and committed great ravages in the Russian army; and subsequently to this period, during their march to Ockcihoff, though their diet did not consist of salted provisions.

It is necessary to state, before giving any account of the particular symptoms of the disease, that the medical officers of the different hospitals are accustomed to use the term *scurvy* in a

more vague and extensive sense than we usually do in England: they apply it to many obscure cases of visceral derangement and cachectic states of the system, with spongy and swelled gums; and therefore, in looking over the registers of the hospitals, it appears that some of these are constantly present under the head of scurvy. There can be no doubt, however, that the disease had actually commenced in April 1823; the proportion of these cases with spongy gums being much larger than usual, but no cases of severity were then observed; and it was not until February 1824, that the disease appeared in its perfect form. Then most of the patients had the surface of the body covered, to a lesser or greater extent, with petechiæ or vibices; the gums were spongy, and often copious hemorrhages took place from them; the teeth became loose; the breath extremely fetid; and the countenance was sallow and bloated, and precisely similar to those afflicted with anasarca. Sometimes the inferior extremities were almost entirely covered with ecchymoses, or livid spots; but these were rarely observed on the arms or trunk of the body. Petechiæ not unfrequently appeared all over the surface. Violent pains occurred in the limbs during the night, so as to deprive the patients of sleep; and the strongest narcotic medicines had no effect in alleviating the sufferings. A frequent occurrence in this complaint was the loss of the use of the limbs and contractions of the tendons of the hams. In several, this continued for three or four months, the patients being confined constantly to bed, and unable even to walk upon crutches; yet all these recovered ultimately.

It does not appear that any affection of the mucous membrane of the intestines existed, as diarrhœa or dysentery did not generally occur.

Slight œdematous swellings of the lower extremities occasionally were witnessed. There was commonly, before the appearance of these symptoms, an unusual feeling of lassitude and depression of spirits. There was no thirst, and the appetite continued good in many during the whole course of the disease.

In the hospital at Nicolaef, only one case proved fatal, and this rather from a dose of calomel, which brought on salivation and diarrhœa, than from the scurvy.

While this disease was prevailing, the buboes in a syphilitic ward of the hospital put on the scorbutic appearance. The skin, for several inches around, became black or livid, like the ecchymoses on the legs in other cases. Hemorrhagy in no case took place from these buboes. Other symptoms of scurvy manifested themselves in those affected with syphilis, and in some dropsical patients. The common ulcers in the hospital entirely escaped the disease.

Two cases of pneumonia were brought into the hospital, and, though not bled profusely, they both speedily sunk. Many cases of pneumonia occurred in the military colonies, and all that were bled died. Afterwards large doses of emetic tartar were given with success.

It was observed that the disease was more frequent and severe among the convicts, and others under the influence of the depressing passions, than among the other seamen.

Although this disease seldom proved fatal in these great naval hospitals, yet Mr. Prout was informed that many persons, particularly women, died of it in the great villages belonging to the crown, beyond the Dnieper.

In the cases of ophthalmia, there was usually a black areola around the eye, and the vessels of the conjunctiva, instead of carrying a florid blood, were gorged with blood of a dark venous colour.

The treatment consisted chiefly in the internal use of mineral acids, vinegar, and bitters; and externally of fomentations with aromatic plants, and vinegar, to the legs. Citric acid is not to be found in this country.

I ought to have mentioned that this disease occurred not only in these hospitals, and in the military colonies, but in the Crimea, and in the governments of Cherson and Agehaterinorloff; in a word, in all that tract of country which had suffered from the visitations of the locusts. These formidable insects appeared first in the Crimea, in the summer of 1820, in small numbers, and are supposed to have crossed the narrow strait of the Bosphorus from the island of Taman. At first they did little injury; and even the following summer many doubted if they were the true locust. In the summer of 1822, a season of great heat and drought, they appeared in vast numbers, not only in the Crimea, but all along the shores of the Black Sea. A prodigious army of them crossed the Danube, and ravaged Moldavia. In 1823, they appeared in still greater numbers, and devoured every thing of a vegetable nature that came in their way. It was precisely at this period that the disease commenced, and there can be little doubt that it ought to be attributed to a want of the usual supply of the sour crout and prepared cabbages, and other vegetables, for the winter. Every peasant in this country lays in an ample stock of these for the winter; but all green vegetables had attained an unusual price at this period, and it was in the power of few to make the usual provision.

In all the hospitals the patients were supplied, as they usually are, with fresh animal food, bread, and grits for gruel; yet the disease was not arrested.

A short account of the climate of the Crimea, and of the country lying along the northern shores of the Black Sea, may not be wholly without interest to those engaged in the improvement of medical topography. The impossibility of determining the precise nature of the climate of a country from its geographical position alone, is very manifest from what we witness in the Crimea. The southern coast, which is protected by the range of mountains running from west to east, enjoys one of the most mild and beautiful climates of Europe, being equally removed from those extremes of heat and cold which prevail in the northern side of these mountains, and in all that extensive country between the Danube and the Don. Along this sheltered border of the Crimea, the vine, olive, pomegranate, and other plants of southern Europe, grow luxuriantly in the open air. The thermometer rarely falls below zero (*of Reaumur?*) and the snow never remains upon the ground more than a few days, during the whole course of the year.

At Synpherpole, a distance of not more than forty English miles on the other side, the thermometer has been seen as low as 23° of Reaumur below the freezing point, and the winters are usually extremely severe. In the imperial garden of Nebiter, on the coast, the thermometer rarely mounts above 25° of Reaumur; while in the interior it frequently reaches thirty, and remains only a degree or two below this for many successive days. Yet, even upon the sea-shore, and still more in the interior, the changes of temperature are sudden and violent in the highest degree; and so well aware are Tartars of this, that they rarely quit home, even in the finest weather, without a thick mantle or cloak.

In various parts of the Crimea, along the course of some of the rivers, and at Kosloff and near the isthmus of Perecop, there are marshes which emit exhalations of the most pernicious character. Fever, intermittent and remittent, and often of a bad form, is frequent in these districts; and, in particular seasons, the whole population appears to suffer. The pallid, sallow complexion of the people constantly reminded me of the appearance of those who live in the marshy districts on the shores of the Mediterranean, in Italy and France.

This autumn (1825) the affection of the brain was unusually severe, and, in spite of the free detraction of blood, ended in effusion into the ventricles in several instances which came under my notice,

ART. V.—*Case in which Secale Cornutum appeared to be efficacious in expelling Coagula from the Uterus; with Remarks.* By WILLIAM MACKENZIE, Andersonian Professor of Anatomy and Surgery, and one of the Surgeons to the Glasgow Eye Infirmary.

BETWEEN ten and eleven o'clock of the evening of the 1st current, I was called to visit Mrs. —, who, about ten o'clock of the morning of the same day, had been delivered of twins, her first children. I was given to understand by the midwife in attendance, that the delivery had been rapid and easy, and that, soon after the second child was born, a large double placenta had been expelled entire. But the uterus continued extremely large, far up in the abdomen, and very hard. In the course of the forenoon, a large clot of blood had come away, but this had not altered the state of matters; and the midwife suspected the presence of a third child in the uterus.

I found the uterine tumor very hard to the hand laid upon the abdomen, of a globular and elevated form, very high in the abdomen, little (if any) less than the uterus is after the expulsion of a first twin, and while the second yet remains undelivered. As I had little doubt, however, that it was filled merely with coagulated blood, I hesitated for a little whether I should not at once introduce my hand into the cavity of the uterus, and remove the coagula, or try the effect of the *secale cornutum*.

I resolved on the latter; and, having weighed out fifty grains and bruised them, I ordered the whole to be infused for ten minutes in a cupful of hot water. One half of this infusion was administered, without any perceptible effect. After half an hour, the other half was given along with the bruised pieces of *secale*. This was immediately followed by expulsive efforts, and a very large quantity of coagulated blood was discharged. The uterus was reduced to its usual size and situation after parturition. The patient soon after fell asleep, and slept for four hours; and has since done well.

Two objections may be started to this case.

1. It may be objected, that I should have rather removed the coagula by the hand, introduced into the uterus. But I would reply, that this operation is attended, especially after the interval of twelve or thirteen hours from the time of delivery, with very considerable pain and irritation; and that this irritation is likely to concur with any other predisposing or exciting causes of inflammation which may be present.

2. It may be said, that the expulsion of the coagula did not depend on the influence of the *secale*, but might have been incidental, or an effect of the mere stimulus of hope. I admit that I assured the patient that I had much confidence in the medicine which I was about to give to her. But that the event was

incidental, does not appear probable, when we consider that twelve hours had passed without the uterus contracting to its ordinary size, and that for seven or eight hours no expulsive efforts whatever had taken place.

In a course of lectures on the *Materia Medica*, which I lately attempted, I placed the *secale cornutum* among the *nervous excitants*. The phenomena of convulsive ergotism appeared to justify my thus classifying this substance among the medicines which affect the muscular system, through the medium of nervous excitation. This view of the *secale cornutum*, if correct, may also serve to explain, in some measure, its effects in parturition, which is an action, not of the uterus alone, but also (nay chiefly) of the diaphragm and abdominal muscles.

An American graduate has asserted that the *secale cornutum*, in whatever manner exhibited, has little or no operation on the system of the male. The pulse, he says, is neither elevated nor depressed by it; and, excepting some nausea or vomiting from large doses, no other effect is manifested. To the uterus, he supposes, its whole force is exclusively directed. This notion is contradicted by the phenomena of convulsive ergotism, such as they have been observed and described by many authors. This disease, as described by Srinck, began with a disagreeable sensation in the feet, a kind of titillation or formication, speedily followed by strong contraction of the fingers, pain in the head, vertigo, delirium, spasms in the limbs, and opisthotonos. Of this disease, as observed by that author, many died, especially children. It evidently existed in the muscular system generally, and there can be no doubt that it affected males as well as females.*

So similar are the symptoms of convulsive ergotism to the phenomena displayed after a dose of *nux vomica*, and some other of the nervous excitants, that it is extremely probable there exists in the *secale cornutum* some alkaloid principle, analogous to strychnia.

Spreull's-court ; 21st April, 1826.

* See TISSOT's Letter to Sir GEORGE BAKER, in the *Philosophical Transactions*, vol. lv. page 113, for an account of the different kinds of ergotism, and the instances of their occurrence.

COLLECTANEA MEDICA:

CONSISTING OF

ANECDOTES, FACTS, EXTRACTS, ILLUSTRATIONS, &c.

*Relating to the History or the Art of Medicine, and the
Collateral Sciences.*

Floriferus, ut apes, in saltibus omnia libant,
Omnia nos, itidem, depascimur aurea dicta.

ART. I.—*An Account of the present State of Medicine in Italy.* By
FR. W. OPPENHEIM, M.D. (From the *Edinburgh Medical and
Surgical Journal*, Nos. lxxxvi. lxxxvii.)

THE above is the title of an article in a late Number of the Magazine of Foreign Literature, an excellent medical work, edited in Hamburgh by Dr. GERSON and Dr. JULIUS. It contains much interesting matter, from which we have made a selection, calculated to give a correct idea of the state of medical science in Italy, and to serve as a guide to those who visit that country for the purpose of adding to their stock of professional information.

Our author describes the institutions of the Italian States, according to the order in which he visited them, beginning with the kingdom of Sardinia, in which there are two universities, one at Genoa and one at Turin.

In the Genoese university, ten professors are employed in teaching the different branches of medicine and surgery. None of these professors, however, enjoy much celebrity; practica anatomy is shamefully neglected, and there is no anatomical museum. The languishing state of science in this university, is attributed by our author to its being under the direction of the Jesuits, who are in possession of its revenues, and expend considerable sums upon the purchase of theological books, while they almost entirely neglect, or give but little encouragement to, the cultivation of natural history, comparative anatomy, and the other departments of medical education. During the short-lived constitution of thirty days, the students ranked themselves on the side of the anti-royalists, in consequence of which the university was closed for three months, upon the return and restoration of the king.

The population of Genoa amounts to 90,000. It has two civil and one military hospital, besides a work-house.

The *Ospedale Pammatone* is very large, and externally resembles a palace more than a hospital. Its pillars, stairs, and balustrades, all of Carrara marble, lead the stranger to expect a commodious interior. But here he is miserably disappointed, and finds a total want of every thing suited to promote the health or comfort of the patients. The wards are very spacious, but badly lighted, imperfectly ventilated, and extremely filthy. The floors are made of tiles, half worn out, and scarcely ever cleaned. The bedsteads are of iron, have no curtains,

and are ranged in three rows, two of which are so close to each other that they touch.

The patients are attended by nuns, belonging to the order of Nostra Donna del Rifugio. Three physicians and four surgeons are attached to this institution, which has 1600 beds, but is capable of containing 4000. When our author visited it in 1824, the number of patients amounted only to 826. Post-mortem examinations are here very rare, and the anatomical cabinet consequently very poor, containing only about a dozen dried preparations, and one skeleton! In 1821, the admissions amounted to 9344; the proportion of deaths to recoveries, as one to six.

Spedale degli Incurabili, is a handsome but badly situated building, containing 1000 beds, and destined for the reception of the aged, the poor, and the insane. Patients of the latter description occupy a separate wing of the building. Their wards are spacious, but here again we meet with three rows of beds; and our feelings revolt at the situation of these wretched beings, the greater number of whom are chained hand and foot to their iron bedsteads! Where such a mode of coercion is employed,—where the strait waistcoat is unknown,—where the physicians, Drs. Isola and Timoni, (we wish not to conceal their names,) hurry daily through this abode of misery, without giving a single direction to the nurse-tenders concerning the treatment of the patients, can we wonder that a cure is scarcely ever effected? We are sorry to find that, disgusting as such a scene must be, it is even surpassed in an asylum at Vienna, where Dr. Oppenheim has seen the lunatics not only chained, but caged, like beasts in a menagerie!

We feel particularly anxious that such a state of things should not exist unknown, and consequently unredressed. What Dr. Oppenheim has already disclosed to our professional brethren in Germany, we think it our duty to publish in Great Britain, in the hopes of thereby contributing to promote a reformation in the treatment of lunatics in Italy; the first step to a reformation being to attract public attention to the extent and nature of the abuse. While we feel it our duty to record this barbarous treatment of lunatics in one of the first cities in Italy, we are yet far from wishing to stigmatise the Italian character as inhumane, or their physicians in general as ignorant; for we ourselves recollect the existence, and that at no very distant period, of abuses not less enormous in Great Britain.

Dr. Oppenheim is doubtful whether to attribute to absolute want, or a degraded state of national character, the alms-begging which prevails in the Italian hospitals. "As I passed each bed, (he observes,) its sickly tenant stretched forth his meagre arms to implore for charity!"

Albergo dei Poveri, a splendid building, adorned with costly architectural ornaments, but deficient in more essential qualities. It contains 2000 persons, consisting of the poor, the aged, and many orphans. The internal management of this institution is much better than that of those already described. The paupers and orphans appeared clean, well clothed, and well fed.

In Genoa there are also a military hospital, containing 800 beds, and an institution for the instruction of the deaf and dumb. The latter was

founded in 1801, by the Abbé Octavius Assarotti, who still presides over it, and pursues nearly the same mode of instruction as is usual in France. In Italy, as elsewhere, this malady has been observed to be much more frequent among the poor than among the rich. The state of this institution, which contains twenty boys and twelve girls, is highly creditable to the Abbé.

Turin, for a population of 80,000, has four civil hospitals. That of *S. Giovanni* is the largest, being capable of containing 600 patients; but, at the time of Dr. Oppenheim's visit, there were not more than 200 in it. The walls are large, and well ventilated. The proportion of deaths to recoveries, out of 4557 patients admitted in 1821, was as one to seven. There is a clinical ward in this hospital, containing twenty beds.

Casa dei Pazzi contained 260 lunatics, of whom more than one-third were chained. Their situation seemed even more deplorable than that of their fellow sufferers at Genoa. Although there are three physicians and three surgeons attached to this asylum, yet Dr. Oppenheim could not discover that any curative measures were ever employed.

The university of Turin has eleven medical and surgical professors. The number of medical students generally amounts to nearly 100. The medical practitioners of the kingdom of Sardinia are much divided as to the systems they pursue. The juniors who have studied in Paris adhere in general to the doctrines of Broussais. Some of the seniors are still Brunonians; and, what is singular, the younger Rasori has many fewer followers than might be expected.

The Grand Duchy of Tuscany has one university at Pisa, and three medical academies, viz. at Florenz, Pistoia, and Sienna. In order to obtain a license to practise, the student must not only have attended an hospital in one of the above towns for seven years, but must have practised during that period under the direction of the clinical professor, and must finally submit to an examination. Even those who have taken the regular academical degree of M.D. elsewhere, must attend one of the Tuscan hospitals for two years, before he is allowed to enter on private practice.

The academies at Pistoia and Sienna are too inconsiderable to claim attention. Our author therefore passes at once to the university of Pisa, which has nine medical and surgical professors. There is here, however, no school for teaching midwifery.

The university building is small and inconvenient, and contains a few lecture rooms, besides an anatomical and surgical theatre; but the latter is so badly lighted, that most of the operations are performed in the former.

The medical courses commence in November, and conclude in August. The students of medicine amount to about 200, of whom many are Greeks. Dr. Oppenheim had an opportunity of hearing one of the lectures on anatomy, and declares it was the worst he ever heard.

We shall give our author's account of the medical institutions at Pisa, in his own words:—

"*Ospedale Santa Chiara è Casa de Trovatelli* contains 300 patients; the wards are clean, spacious, and lofty. The medical and surgical patients, in this as in the other Italian hospitals, are not separated from each other, but lie in the same ward. There is a clinical ward, with twelve beds, for the treatment of medical cases, under the direction of Professor Morelli; besides one for surgical cases, under the direction of Professor Vacca Berlinghieri. The attention of these professors is not, however, confined to the clinical patients, for they make remarks upon every interesting case in the hospital. The surgeon's visit is made at seven in the morning, the physician's at ten. The hospital pupils here, as in all the other Tuscan schools, wear a particular uniform, consisting of a red surtout and a white apron: as the domestics of the hospital are similarly dressed, they are scarcely distinguishable from the students.

"Professor Vacca Berlinghieri is extremely polite to strangers, and is very communicative upon professional subjects. I shall relate what I saw and heard while in his company. His method of lithotomy* is well known, from his three Memoirs on that subject. His success has undoubtedly been considerable; for, of twenty-nine patients upon whom he has operated, he has lost but two; and, of these, one was more than sixty-four years old. I saw two persons upon whom he had operated; one was a boy, four years old, who had been cut for the stone five days before. He seemed to be doing well, the greater part of his urine being already voided through the urethra, while the wound was beginning to heal. The other was a very melancholy case of a young man, on whom the operation had been performed fourteen weeks previously to my visit. The stone had been broken in the first attempt to extract it, and the fragments were successively removed, great care being taken by the Professor to leave no part of it in the bladder. He used injections, and every other usual precaution; but nevertheless, and although the wound had assumed an healthy appearance, the patient complained of calculous pains on the twelfth day, when the Professor discovered another piece of the stone in the bladder. In removing this he made no new incision, but merely dilated the original wound with his finger. This fresh irritation caused a violent inflammation of the parts, and the swollen part of the rectum, which had performed the office of a valve in preventing the fæces from entering the bladder, sloughed away, so that a fistulous opening was formed between the rectum and the bladder, and the urine was consequently evacuated partly per anum, and partly through a catheter introduced into the urethra. When the catheter was introduced only as far as the neck of the bladder, the urine flowing through it was mixed with fæcal matter; but, when it was pushed higher towards the fundus, the urine was natural. When I saw the patient, he was less hectic than he had been, but still the fistulous opening into the rectum remained; its calibre was, however, diminished.

"When this operation had been revived in France by Sanson, and improved in Italy by Vacca, who merely makes an incision into the neck of the bladder, it excited much attention, and was practised by many French and Italian surgeons with considerable success. Scarpa,

* He opens into the bladder from the rectum.

however, urged many objections against its safety, the most important of which was the danger of wounding the vesiculæ seminales. To this Vacca replied, by stating that, of eighty patients thus operated on, none had felt a diminution of their sexual powers. It is very remarkable that so celebrated a surgeon as Dupuytren should have so suddenly changed his opinion concerning the propriety of this operation. He now declares himself decidedly hostile to it, and yet, when I was in Paris in 1823, he was quite enthusiastic in its favour; for I heard him say, that the number of patients who suffer from a fistula after this operation, was not greater than that of those who died after any other!

"Calculous complaints are very rare in the neighbourhood of Pisa, and the majority of the cases operated on by Vacca come from Bologna, Genoa, and the Piedmontese countries, whose population subsist almost entirely on vegetable nutriment; a fact proving that the formation of stone does not depend upon a superabundance of nitrogen.

"Diseases of the large arteries are so unfrequent at Pisa, that there had been no operation there for aneurism during ten years."

Dr. Oppenheim, however, saw at Pisa one case of popliteal aneurism in a healthy man. It is singular that Vacca refused in this case to perform the operation; alleging as a reason, that he believed the patient's blood possessed too little *plasticity*,* and the arterial coats had too much inclination to suffer from distention or rupture, to authorise a reasonable hope of successful termination. He could not assign any intelligible grounds for this opinion, which was, however, justified by the event; for, another surgeon having performed the operation, hemorrhage took place on the third day, which was stopped by tying the femoral artery above the origin of the profunda. This resource proved also ineffectual; for a fresh hemorrhage occurred in three days after, and the patient died.

Dissection showed that all the coats of the artery had been divided by the ligatures, while no sufficient coagulum had been formed, and no attempt made towards the exudation of coagulable lymph.

What symptoms Vacca conceived to contra-indicate the operation in this case, we, as well as Dr. Oppenheim, are unable to guess.

"Fistula lachrymalis is a very frequent disease at Pavia, and Vacca has observed it to occur in women more frequently than in men, in the proportion of seven to one. His operation consists in making an opening into the sac, with a small straight bistoury; he afterwards widens the sac with a fine silver probe, and introduces into the duct a bit of extremely fine catgut, having a silk thread fastened to its upper extremity, by means of which it is secured above. In the course of a few days, the lower end of the catgut is forced through the nostrils by blowing the nose; it is then drawn down and detached from the silk thread, to which he fixes a small dossil of charpie, and is thus enabled to introduce the latter, from below upwards, into the lachrymal sac. The advantage of this method is, that the dossil being introduced into the sac through the lower opening, the superior external opening need not be enlarged or stretched so as to render it liable to inflammation.

* The probable meaning of this expression is, that the blood was deficient in coagulable lymph.

Vacca insists upon the necessity of dividing the tendon of the orbicularis muscle in this operation, as a portion of the sac lies directly under this muscle, and of course cannot be touched with the necessary escharotics; and, if this be not done, he contends that this portion of the sac will remain in a state of inflammation, and will occasion a relapse of the disease. In my opinion, the division of this tendon cannot be effected, without danger of also dividing the lachrymal duct.

“ One of the most interesting cases I saw at Pisa, was an emphysema caused by fracture of the ribs on the right side of the thorax, together with injury of the pleura and lung, but without any external wound. The patient was brought to the hospital five days after the accident, when the emphysema was excessive, and had extended over the entire of neck, chest, abdomen, and scrotum. The patient felt very little pain, and was quite free from the usual symptoms, cough and expectoration of blood. He could lie on either side, but preferred lying on the uninjured side. His respiration was free, and he could make a deep inspiration without its causing uneasiness. The transverse fracture of the rib was quite evident on examination. This case is certainly extremely interesting, and seems inexplicable. Under other circumstances, it would have been necessary to make an immediate incision, but Vacca merely applied a few leeches, and the disease disappeared gradually.

“ I saw here also a case of peculiar induration of the mammary glands, in a strong healthy woman, aged thirty, who had been but a few days in the hospital. Both breasts were equally affected, and were of a stony hardness; the indurated glands were movable, and the skin immediately covering them was very red, while in every other part of the breast it was quite natural as to colour. The temperature of the affected parts was elevated, and the nipples (as it were) pressed inwards. The woman said that the disease had commenced suddenly, and without any assignable cause, about seven years before, since which it had remained in the same state.

“ In every other respect she felt herself remarkably well, did not feel any pain whatsoever in the breasts, and had no disorder of the digestive organs. There was no suspicion of syphilis, and the malady bore not the least resemblance to schirrus; for *both* of the mammary glands were attacked at the same time, their temperature was increased, and the skin red. This disease, too, had remained nearly stationary from the time of its first origin; and in its form the swelling did not at all resemble schirrus, being destitute of the knotty elevations and inequalities so peculiar to that affection. The axillary glands were quite healthy.

“ Vacca treated this disease as a case of chronic inflammation. He commenced with a venesection, the woman's constitution being very strong; and he afterwards applied leeches to the part, and cloths moistened with aqua laurocerasi. I saw this treatment continued for three days, without effect.

“ The operation of trepanning, which I never saw performed in France, and but once in England, during a very diligent attendance on the hospitals in both these countries, is by no means of rare occurrence

at Pavia. Neither are its results, on the whole, unfavourable. In two cases, a perforation was made through the mastoid process, for the purpose of giving exit to matter formed in its cells, in consequence of otitis.

"Vacca has lately abandoned an operation he was formerly in the habit of performing frequently; I mean tying the saphena vein in cases of varix and varicose ulcers. The success of this practice was for a time considerable, but cases afterwards occurred in which dangerous symptoms were occasioned, such as violent inflammation of the vein. In a few instances this inflammation proved fatal."

Dr. Oppenheim observes, that an operation occasionally attended with such dangerous consequences, ought never to be undertaken for the relief of a complaint in itself destitute of danger.

We subscribe most willingly to this opinion, having ourselves learned from an extensive experience the uncertain issue of tying the saphena vein. One case we shall not easily forget. A young person, otherwise enjoying perfect health, was admitted into an hospital in order to undergo this operation. It was performed. Inflammation of the venous system supervened, and the patient died in a few days. For further information on this subject, see Hodgson on Diseases of the Veins and Arteries; Mr. Carmichael on Varix and Venous Inflammation; Dublin Hospital Reports, vol. ii.; and an excellent article on *Varices*, in the Dictionnaire des Sciences Medicales.

Florence.—Population, 80,000.

There are two hospitals, besides a foundling hospital.

1. *Spedale de Santa Maria Nuova*, capable of containing 1200 patients, but Dr. Oppenheim found in it only 600 in April 1824. The wards are large and lofty. The lower wards are in the form of a cross, and contain from 150 to 200 beds. They are badly ventilated, and uncleanly. Six physicians and six surgeons are attached to this institution, and attend in rotation, each for one month. Dr. Oppenheim blames this practice, as subjecting the patients to a constant change of treatment. The clinical wards of this hospital contain fifty beds; and, what is remarkable, almost all the operations are performed by the pupils,—of course, however, in the presence of the professors. Dr. Oppenheim saw here many cases of compound fracture, which were treated according to Dupuytren's method. He saw a case of medullary sarcoma affecting the testicles: castration was performed, but in five days a new fungous growth began to arise from the wound.

"Another melancholy picture was presented, by a case of fungus of the antrum highmorianum, which had forced its way into the mouth. Indeed, I do not think I ever witnessed an hospital containing so many desperate diseases, such as hopeless cases of morbus coxarius, cancer, and abscesses, attended with confirmed hectic. *Fistula lachrymalis* is here also common; and I had an opportunity of seeing some cases of suppuration within the substance of the mastoid process, one of which proved fatal, from caries and effusion of matter in the dura mater. It was attended with symptoms of cerebral compression.

Scrofula in all its forms, such as tubercular phthisis, caries of the

bones, &c. is not less frequent here than at Pisa. The Italians administer occasionally muriate of barytes in this affection, and Vacca often sends his scrofulous patients to the sea for the benefit of bathing.

The operation for cataract, employed both at Florence and Pisa, is depression or else reclination, the needle being introduced through the sclerotica.

2. *Ospedale de St. Bonaficio*, destined for the reception of lunatics, incurables, and those afflicted with cutaneous complaints, is capable of containing 1000 patients. The lunatics are here much better treated than at Pisa or Genoa: they are never chained, but are subjected to much milder modes of coercion, such as the strait waistcoat. Dark rooms, having the walls lined with padding to prevent the patients from injuring themselves, are used for the confinement of persons during the accession of the maniacal paroxysm. There is no care taken to provide amusements or employment for the patients, and, on the whole, their *moral treatment* is entirely neglected; so that Dr. O. justly remarks, it ought to be called an *asylum*, not an *hospital*, for lunatics, the latter name implying the application of proper curative means. The consequence of this neglect is, that a cure is scarcely ever heard of.

Foundling Hospital.—A well-managed institution, which receives annually from 1500 to 1800 infants. They are well taken care of, and remain one year in the house, after which they are sent to the country. The bedsteads are of iron, and each contains four separate divisions, in which are placed four children's beds. This arrangement facilitates the attendance of the nurses upon the children.

“The diseases observed among the foundlings are not numerous. Inflammation or blenorrhœa of the eyes is uncommon, a circumstance probably owing to the exclusion of a glaring light from the wards, and to their cleanliness and proper ventilation. Jaundice, and induration of the cellular membrane, are quite unknown here. A great number of children *are said* to fall a sacrifice to syphilis. When brought into the house, they are apparently healthy, but in the course of a few weeks, or even days, they become pale and thin, cry or rather *whimper* much, get an appearance of old age in the face, and often become covered, about the genitals, anus, &c. with pustules and small ulcers; they grow cachectic, and finally die in a state of marasmus. The exhibition of mercury in this affection is found to be quite useless. I myself concur in the opinion of Dr. Breschet, of Paris, who has observed a similar complaint among the infants in *l'Hospital des Enfants trouvés*, but does not conceive it to depend upon syphilitic taint. His observations render it probable that it arises from an insidious inflammation of the abdominal viscera; a view of the subject confirmed by the diminution in its mortality, since a mode of practice founded on this view has been adopted.

A small *lying-in hospital*, containing six beds, erected for the instruction of the Tuscan midwives, is connected with the Foundling Hospital. In order to obtain a license to practise midwifery, the females must attend three courses of lectures on that subject; besides which, they must reside eighteen months in the institution. The anatomy

of the female pelvis is taught by means of beautiful wax models, which can be taken to pieces.

Puerperal fever is rare at Florence. On an average, twins occur five times in the hundred. The *cæsarean* operation has been performed twice there, and in both cases was unsuccessful. The midwifery practice seems on the whole judicious, and the accoucheurs are not addicted to the unnecessary use of instruments in delivery. Professor Bigeschi speaks highly of the ergot, as a means of forwarding the progress of labour in tedious cases.

"I must not omit mentioning the celebrated Florentine wax-works, which exceed the Vienna collection, not only in number, but in execution and anatomical accuracy. What has been added lately is inferior to the old collection, especially in the colouring. I shall never forget my astonishment at seeing a representation of the distribution of the fifth pair of nerves. It left nothing to be wished for, and had every branch described by a Bock or a Meckel. In fact, on examining it, you could not determine which was the more to be admired,—the anatomist who made the dissection, or the artist who made the model. The late Professor Ucelli, who was not only an able anatomist, but an expert artist, enriched this collection with many beautiful specimens in comparative anatomy, well worthy of a minute examination. The imitations of plants, fruits, &c. are not less elegantly executed; but this part of the collection loses its value, from the circumstances that the objects represented are indigenous in Italy; and we do not find any imitations of rare or tropical plants.

"I did not observe so great a number of blind people in any Italian city as in Florence. Every good begging station in this city is occupied by a blind beggar, and those stations descend by hereditary right, from one generation to another. How great the profits of these beggars must be, appears from the answers of a young man, when asked how it happened that he could afford to marry:—"Thank God I have a blind father; therefore, as long as he lives, I shall never want." In general, these blind beggars are attended by stout young men, so that the proper order of things is reversed; for he who can neither see nor work supports him who can do both!

"Here I cannot omit adverting to another custom, prevalent not only in Florence, but in the other Italian cities, and which must necessarily exercise an injurious influence on the state of the medical profession. The apothecary's shop is the physician's rendezvous; for his messages are left, not at his own house, but at the shop of the apothecary whom he patronises, or who patronises him.

"The Italians do not understand the comfort of the expression "at home," like us Germans, but spends all his leisure hours in the open air, in the street, and engaged in the "*dolce far niente*." The first thing the Italian practitioner does in the morning, is to hurry to his apothecary's shop, for the purpose of learning what orders have been left for him. Meetings are held by physicians, and appointments made at the shop of the apothecary; and there the young physician, who is looking for practice, *must* loiter away his days: I say *must*, for, if he does not do so, he will not succeed. Every stranger, who is in want of

a physician, sends for one to the apothecary; and every one, who has no family physician, does the same. The *understanding* relative to their mutual interest, which arises from this singular connexion between these branches of the profession, must prove injurious to the patient, at least so far as it increases the probability of his being made to swallow medicine, more with the view of increasing the bill, than of restoring his health. This custom evidently degrades the physician, by making him a sort of creature of the apothecary, and likewise occasions a most serious loss of time, just at that period of life when his time is most valuable."

The Papal Dominion.—There are two medical schools in the dominions of the Pope,—viz. one at Bologna, and one at Rome.

Rome.—The university at Rome is named *Della Sapienza*, and has fourteen medical professorships. This university has no museum whatsoever.

The medical clinic is in the *Ospedale di St. Spirito*, where practical anatomy is also taught. The surgical clinic is in the hospital at *St. Giacomo in Angustia*. There is no institution for the instruction of accoucheurs. The internal arrangement of the Roman hospitals is so peculiar, that it deserves particular notice. They are altogether ecclesiastical institutions, formed according to the notions of churchmen, and destined to serve rather as asylums for the administration of spiritual consolation, than for the cure of diseases. Accordingly, the physicians and surgeons are persons but of secondary importance in a Roman hospital, while the priests and confessors enjoy the chief authority! They alone are the resident officers; to them the admission of a new patient is first communicated; and they administer the first remedies, confession and the sacrament. Chance must decide upon the remaining part of the cure; for, after having taken care of the soul, they concern not themselves about the cure of the body! The hospitals are small, but on the whole rather clean. The bedsteads are generally made of iron, some with and some without curtains. Some of these hospitals are situated in the most unhealthy parts of the city. They are nine in number, and altogether contain about 2000 beds. In some there are separate wards for consumptive patients; for the opinion that consumption is contagious, is universal in Italy. In the lunatic asylum are 400 patients, on whom the whip and the chain are not spared! Some of the hospitals cannot be visited by strangers, except permission has been granted by the Pope, a favour of which his holiness seems to be very sparing. All the convalescents from the different hospitals are brought to that of the *Holy Trinity*, for the purpose of enjoying the benefit of a nutritious diet. Dr. Oppenheim finds fault with this arrangement; and we agree with him in thinking that the convalescents might be well fed in the different hospitals, without going to the trouble of removing them to this general convalescent hospital, where, after all, they are only permitted to remain three days!

The diseases of every nation are necessarily much influenced by the customs and domestic habits of the people, and the nature of the climate. He who has not been an eye-witness of it, cannot form any idea

of the uncleanness prevalent in the south of Italy. The stranger, on his first arrival at Rome, is amazed at seeing whole groups of people, "*gruppi dei otiosi*," consisting of fathers, mothers, children, and friends of the family, all employed in performing for each other an office which we shall not name. Suffice it to say, they use their fingers for purposes elsewhere performed with combs! This custom is so general, that it has, as a matter of course, occupied the pencil of the artist; and, in the magnificent collection of pictures at Florence, is one in which Venus is seen thus elegantly employed on the head of Cupid! So much are the inhabitants accustomed to sleep two in one bed, that, when two strangers arrive at a country inn, and require two beds, their demand is considered unreasonable. The peasants of Rome and Naples look upon washing and cleansing the skin as quite unnecessary; and the upper ranks are not less negligent of the bath, than the ancient Romans were attached to its use. The great number of church holidays serves, indeed, in a certain degree, to keep the city from utter filth; for the streets through which the religious processions are to pass must be previously swept.

In so warm a climate, this utter neglect of cleanliness necessarily produces an abundance of cutaneous complaints; and accordingly the hospital *Della St. Maria*, containing 400 beds, is insufficient for the accommodation of patients so afflicted. Tinea capitis is treated in this hospital in the following singular manner:—The head is first smeared with butter, for the purpose of softening the scabs. When the scabs are removed, the head is shaved, and all the roots of the hair pulled out with a broad tweezers. The next step is to make forty or fifty incisions in the scalp with a razor. The free flow of blood from these incisions is favoured by making the child sneeze. The head is finally washed with cold water, and then rubbed with rancid oil. This *cutting* and *plucking* is repeated every four or five days, as fast as the hair begins to appear. This *cure*, which they commend for being *simple* and *radical*, lasts generally for six or eight months, and in obstinate cases for one or two years!

Vaccination is again much neglected under the present Pope, and of course small-pox is on the increase. There were about seventy small-pox patients in the hospital at the time of Dr. Oppenheim's visit.

We shall not enter into the sources of the "*aria cattiva*," which renders Rome so unhealthy, but merely remark, for the benefit of such of our readers as may intend to visit that city, that its influence is most severely felt during the months of June, July, August, and September. The miasma produces, besides common agues, a very fatal species of fever, which is termed the malignant ague. "The patient becomes at once weary and weak, complaining of heaviness of his limbs, heat of skin, dull headache, and confusion of ideas, &c. The looks are wild, the face oftener pale than red; and, even when it is flushed, a yellowish white tinge is perceptible near the angles of the mouth. The belly is often tender to the touch, and the right hypochondrium swollen. The patient is sometimes costive, but not unfrequently diarrhœa is present from the beginning. Enough has been related to place it beyond doubt that this fever, at its commencement, is of a gastric character, and is

attended with an inflammatory affection of the liver. After the above symptoms have continued for some time, the fit commences with a violent rigor, which is followed, in an inconceivably short space of time, with a general and excessive disturbance of the whole nervous system; picking the bed-clothes, subsultus tendinum, the most violent delirium, and a low muttering sort of raving, succeed each other rapidly, and without any apparent regularity. In short, the disease at one moment wears the aspect of a fever attended with excitement, and at the next has all the characters of typhus in its latter stages; and these two forms, alternating with each other, seem, if it were possible, combined in the same patient. After the fit, the patient feels a greater degree of depression than before. Vomiting often comes on at the height, or towards the end, of the paroxysm. The second fit commences five or six hours after the first; and the third begins after an intermission of about the same duration, unless, indeed, (which not unfrequently happens,) death has already closed the scene. *The third fit is always fatal!* Peruvian bark, exhibited in the largest possible doses, is the "*sacra ancora*" on which the Roman physicians place all their hopes. During the fit, blisters and sinapisms are applied to the extremities, while the head is assiduously cooled by means of cloths dipped in cold water. The instant the first fit has ceased, bark is given, and that with the greatest possible diligence, as they do not know the moment a second fit may commence. It is always a favourable symptom that the "patient bears the bark well, but it too often happens that the stomach immediately rejects it. When this is not the case, four, or even six, ounces of bark are exhibited in the course of the day. The second fit is then so much diminished in violence, that its accession causes but little disturbance, and the patient is saved. The progress of this disease is most rapid in strong, robust, and plethoric habits. Relapses also frequently occur. In 1825, the proportion of recoveries to deaths was as eighty-five to fifteen; in other years, it has been as eighty to twenty. All other remedies have proved ineffectual in this fatal disorder. Venesection, emetics, opium, &c. seemed only to hasten its fatal termination, so that the physicians now place no dependence upon any thing except bark, which is used in immense quantities at Rome. The quantity used in the *Ospedale St. Spirito* often amounts daily to forty or fifty pounds."

The latter statement of our author, we cannot help observing, accords ill with his previous sweeping censure, concerning the inattention prevalent in the Roman hospitals with regard to the *bodily complaints of the patients*.

Some successful trials had been made at Rome with the sulphate of quinine, both in this fatal and in the common forms of ague. When there are symptoms of a deranged state of the alimentary canal, the Romans place no reliance on emetics, but cleanse the primæ viæ with one drop of croton oil, previously to exhibiting the bark.

The following rules are laid down by the Roman physicians, for strangers who remain at Rome during the sickly season:—They must get up at six o'clock, and, having made a light breakfast, on biscuits, coffee, &c. they may go about their business until after eleven. At

one o'clock they dine, and ought to sleep for a few hours after dinner. It is reckoned dangerous to be out at noon, sunrise, or sunset. Two hours after sunset, a walk is recommended; after which a slight supper may be taken. At twelve they ought to go to bed, and should sleep with but little bed-clothes. The windows of the bed-room should be kept shut during the night. Strangers are likewise recommended to indulge in cool drinks, and to be very abstemious with regard to wine, which ought to be diluted with water.

"Phthisis is not common at Rome, and its introduction has been attributed to the English! for it is universally believed to be contagious. When a consumptive patient dies, his clothes, furniture, and bed, are always burned. There exists, too, a Papal Bull, prohibiting the sale of such articles. Scrofula is not uncommon at Rome, and calculous complaints are of rather frequent occurrence. Professor Sisco, who has performed the operation of lithotomy on more than fifty patients, follows the method recommended by Cheselden,—i. e. the lateral operation: his success has been considerable, and he objects in strong language to the recto-vesical operation of Vacca. The Roman surgeons boast of great success in strangulated hernia. Sisco never tries to heal the wound by the first intention, because he considers the cure by supuration as the only radical one, as it produces a complete solidification of the parts, and thus prevents the necessity of afterwards wearing a truss.

Aneurisms are not common in Rome; their cure is generally attempted according to Vansalva's method. The Roman surgeons *have hitherto never ventured to tie the artery in this disease, but always proceed at once to amputation when Vansalva's method fails!* and yet Rome is scarcely three days' journey from the residence of Scarpa!

In syphilis, mercury is now used both externally and internally. Buboes are never permitted to burst spontaneously; they are always opened with the lancet.

The doctrine of contra-stimulus has fewer advocates in Rome than in any other Italian city.

Bologna has 60,000 inhabitants; an university, two civil hospitals, an orphan-house, and a work-house. *Spedali della Vita* contains about 500 beds; the wards are spacious, well ventilated and clean. Professors Comelli and Tommasini superintend the medical clinic, and Professor Venturoli the surgical. It is unnecessary for me to detail the medical practice in vogue here, as it is generally known, and the doctrines of contra-stimulus are already sufficiently familiar to the medical world, through the medium of a journal published in Bologna, under the title "*Giornali della nuova Dottrina Medica Italiana.*" Without discussing the merits or demerits of this doctrine, I may however remark, that the very large doses of medicines which its advocates are in the habit of exhibiting, have universally the effect of rendering the system so difficult to be acted on, that the doses must be constantly increased, in order to produce any effects. Thus, I saw a man under treatment for abdominal disease, on whose bowels half-a-drachm of jalap, and four ounces of castor-oil, had not the least effect, until their action was

assisted by a purgative enema! We pass by the other hospitals, as affording nothing worthy of remark, except that their internal economy seems better regulated than that of other Italian hospitals.

The university reckons about 600 students. It is large and beautifully built, and contains not only a good museum of natural history, but a tolerable anatomical collection. The preparations with which it has been enriched by the present professor of anatomy, Mandini, are very fine; as are also those made by Professor Quadri, who formerly taught here, but now resides at Naples. In the wax-works, I was much struck by the beauty of the pieces representing the muscles: they are the works of Lelli and Madame Penarolini. The library contains about 150,000 volumes. The librarian, Professor Mezzofanti, is distinguished in the literary world by his uncommon talent for languages. The Botanical Garden is the best I saw in Italy.

The Kingdom of Naples.—A glance at the state of general literature in Naples, will best explain the state of medical science in that city. All foreign books, even those which have received the sanction of the Roman censors, are subjected to the revision of the Neapolitan censors. If, after a scrupulous examination, nothing is detected unfavourable to the king or church, the publication of the book is permitted, and a tax of four carolines on each volume must be paid by the publisher: this sum is exorbitant, when we consider the cheapness of Italian books. So heavy a tax is likewise imposed upon public prints, that it amounts to a prohibition of all foreign journals. These regulations render the advancement of science so slow in Naples, that what has long since become obsolete in other countries is there considered as a literary novelty. The Neapolitan physicians find it, therefore, impossible to keep up with the modern improvements in medicine, and consequently their practice is formed on antiquated models. Luckily for the inhabitants, the climate is so mild, that they seldom stand in need of medical aid, and may in general leave their complaints to the cure of the *vis medicatrix naturæ*. Little can be expected from an university in such a country, even though it boasts of such men as Vulpes, Quadri, and Lanza. The hospital accommodation, too, at Naples, is quite disproportioned to the number of the inhabitants, which amounts to 450,000.

Dr. Oppenheim then proceeds at some length to describe the *Lunatic Asylum* at Aversa, a small town, situated eight miles from Naples, on the road to Capua. This institution excels, indeed, all others in Italy, but still falls far short of similar institutions in England and Germany. The only peculiarity we think worth relating, arises from the habits and genius of the Neapolitan people. In English mad-houses, much reliance is placed in affording means of employing or amusing the convalescents. With this view, we provide the lower classes with the means of following their ordinary trades and occupations, while we offer to the rich the recreation of cultivating a garden, or reading in a library. At Aversa, what are the objects of amusement? Billiard tables, music, various petty national games, puppet-shows of all descriptions, and a variety of toys!

We would almost believe its inmates to be boys, not men: but men it seems they are, at least in Naples, where even the upper classes spend the whole day in the coffee-houses or at the theatre, while the lower orders visit the puppet-show at seven o'clock in the morning, after which they dance the "tarantala," and play the "morra." This systematic trifling and habitual idleness afford a sufficient excuse for the indignation of the priest described in Kelly's Memoirs, who, having dispersed a crowd of Lazaroni assembled around a puppet-show, held up the crucifix with which he had dealt his blows, and cried "*Ecco il vero Polcinello*;" an exclamation which at first appears ridiculous, if not impious, but really conveys a most degrading idea of the people whom he addressed.

The Lombard State forms at present a province of Austria, and the constitution of the two universities it possesses is modelled entirely according to the plan of that of Vienna. A certain course of study, which lasts for five years, is laid down, and no deviation from this plan is permitted. The disadvantages of a restrictive plan of study, which assimilates an university to a great school, are too obvious to require comment; and we cannot therefore help regretting, with Dr. O., that it should have been lately introduced into France. Our regret is increased by observing that this plan does not include a branch of medical study, to which we owe our chief progress in anatomy and physiology, and to whose aid we are to look for important additions to pathology,—we mean comparative anatomy. When (says Dr. O.) we find so important an omission, we must indulge in gloomy anticipations concerning the future progress of science in a state which was formerly so distinguished in comparative anatomy, and produced such men as Spallanzani, Valsava, Lancisi, &c.

Padua, a town with 20,000 inhabitants, has one spacious hospital capable of holding 300 patients. The wards are clean and well ventilated, and the beds are placed at a sufficient distance from each other. The clinical wards contain twenty-four beds. The medical department is superintended by Professor Brera; the surgical by Professor Ruggieri. The university reckons about 700 students. The building is very beautiful, and originally a palace, planned by Palladio. The cabinet of natural history is tolerable. Fabricius ab Aquapendente, Prosper Alpinus, Morgagni, and other celebrated men, once ornamented this school. Brera, the present professor of the practice of physic, is a zealous advocate of the system of contra-stimulus, and of course propagates this doctrine among his pupils. It has, however, found fewer advocates among the private practitioners at Padua, than among those at Bologna.

Pavia has 22,000 inhabitants. The town hospital is well situated and very roomy, and contains 400 beds. It is better calculated for the purposes of an hospital than any other institution in Italy, having been originally built for the accommodation of the sick, and not, like the rest, for a monastery or a palace. There are four clinical wards, viz. one for medicine, one for surgery, one for diseases of the eye, and one

(as the catalogue has it) "*per la istruzione di maestri in chirurgia e flebotomia.*" Connected with the hospital is a small institution for lying-in women.

The university is attended by about 400 students. The building is large, and the architecture fine. No university in Italy can boast of such rich cabinets of natural philosophy, chemistry, natural history, and anatomy. The latter, commenced by Rezia, received many valuable additions from the celebrated Scarpa, lately a professor at Pavia. Burserius, Tissot, and the two Franks, formerly taught at Pavia.

CRITICAL ANALYSIS

OF

ENGLISH AND FOREIGN LITERATURE,

RELATIVE TO THE VARIOUS BRANCHES OF

Medical Science.

*Quæ laudanda forent, et quæ culpanda, vicissim
Illa, prius, cretâ; mox hæc, carbone, notamus.*—PERSIUS.

DIVISION I.

ENGLISH.

ART. I.—*Practical Observations on the Convulsions of Infants.* By JOHN NORTH, Surgeon-Accoucheur, Member of the Royal College of Surgeons.—8vo. pp. 282. Burgess and Hill, London, 1826.

THE late very distinguished Dr. JOHN CLARK, in his *Commentaries on the Diseases of Children*, laid it down, "that, in every case of convulsion, the brain is at the time organically affected, directly or indirectly;" and it can scarcely be unknown, at least to many of our readers, that the doctrines of this practitioner still continue to influence many of our brethren, some of them holding the highest rank in the same department. The natural consequence of this pathology is a corresponding activity in the treatment, which has principally, if not exclusively, consisted in the general or local detraction of blood, and the administration of calomel in full and frequently repeated doses. Such are the leading doctrines of Dr. Clark and his followers, and the principal object of the work before us seems to be, to enter a protest against the correctness of the theory, and, as a necessary consequence, the propriety of the practice.

Until the appearance of the volume now under consideration, we are not aware of any English author having written specifically on the convulsions of children, although several works have emanated from the French press; the most recent of which,

that of M. BRACHET "*sur les Causes des Convulsions chez les Enfants, et sur les Moyens d'y Remedier*," now lies before us: and, before we commence our analysis of Mr. North's work, we may observe that Brachet adopts what may be termed a modification of Dr. Clark's opinion, inasmuch as he holds the convulsions of children to be always dependent upon "irritation, either primary or secondary, of the encephalon." This irritation, we are informed, may exist in different degrees, and leave behind traces which vary in distinctness, or may be sometimes entirely wanting; for this author distinctly states as his opinion, that it is not necessary for the cerebral tissue to be altered, even in cases of convulsions which have proved fatal. We shall presently find that the author more immediately before us differs in his opinions from both, although less from Brachet than from Clark, as may be gathered from what we have already said.

The first chapter of the "*Practical Observations*" embraces a variety of important subjects: it relates to the frequency, the causes, the symptoms, the prognosis, and the appearance on dissection, in the convulsions of infants. The discussion of these questions occupies nearly half the volume; it is full and elaborate, evincing considerable research, and containing numerous references to the opinions of the best authorities, as well as abundant proofs of original observation.

The *frequency* of convulsions, at least as a fatal complaint, does not seem to us very easily ascertained, because when they occur in the course of any disease which proves fatal, (and there are few serious diseases of infants in which they may not,) it is scarcely a legitimate inference to attribute the death of the patient to what in reality has been only one of the symptoms. It is stated by Dr. Clarke, that, of 17,650 children born at the Lying-in Hospital in Dublin, one-sixth perished during the first year, and "that nineteen out of twenty fell victims to convulsions;" while Dr. Lange has recorded that, "during thirteen years, no less than 12,769 children perished from epilepsy" at Copenhagen. These calculations, we suspect, would lead to a very exaggerated idea of the fatality of convulsions as an independent disease. It is true, however, as observed by Mr. North, that—

"Every allowance, however, being made for these probably erroneous records, it cannot be denied that a vast number of children are suddenly cut off by an unexpected attack of convulsions, which not unfrequently occurs when no previous derangement of health could be discovered, or at a time when any malady, under which the child was labouring, began to assume a less severe aspect, and to justify a confident and favourable prognosis. The occurrence of such cases is no

less distressing to the parents than prejudicial to the practitioner. We never escape from censure when we have raised hopes which are suddenly and unexpectedly blasted, however impossible it might have been for human foresight to anticipate an unfavourable termination. Although, then, the convulsions of children are in most cases symptomatic of some other disease, they are of sufficient importance to admit of a separate consideration, inasmuch as they not unfrequently destroy life in a few moments, when it was not endangered by the malady which excited them. Notwithstanding, however, the universal admission of the fact, that convulsions are always to be regarded with apprehension, I am inclined to believe, from frequent personal observation, that no cases are dismissed in general practice with less attention than those which pass under the convenient term of *convulsions*." (P. 3, 4.)

It is, indeed, too much the custom with practitioners to content themselves with classing all spasmodic affections of infants under the general name of convulsions, without sufficiently discriminating the diseases on which they primarily depend; and even with regard to parents, although alarmed at the first attack, it is astonishing how soon they become in a great measure reconciled to their occurrence. By this means, attacks of convulsions are suffered to become habitual, and a morbid sensibility is generated, which often lasts through life.

Popular belief, as well as the authority of various medical writers, would lead us to suppose that children with large heads are more liable to convulsions than others. This certainly is not in conformity with our own observations; unless the head has increased in size so rapidly as to lose its due proportion to the rest of the body. This, however, is rather to be regarded as constituting chronic hydrocephalus, than simply what is understood by a large head. Our author expresses no direct opinion relative to this point, but says that he has seen convulsions "occur very frequently in children with small heads."

With regard to the convulsions themselves, we are told—

"The parts most commonly the seat of convulsions are the eyes, the features of the face, the superior and inferior extremities, and the respiratory muscles. It perhaps never happens that the features retain their natural tranquillity of expression while other parts of the body are convulsed, although the preternatural movements of the face are sometimes slight.

"Each part may be separately and successively affected, or the whole frame may be convulsed at the same moment. The convulsive movements are sometimes confined to one side of the body. This variety does not, however, alter the nature of the disease, and is not of sufficient importance to warrant the distinction which has been adopted by some authors, of general and partial convulsions. They are each produced by the same causes, and require the same general treatment.

"Neither fever nor disturbance of the intellectual functions forms a

part of the symptoms of a paroxysm of simple convulsions. A child may not be able to hear during the paroxysm; but this is not a proof that its faculties are destroyed. The muscles are no longer obedient to the will. Mr. Thompson, of Whitehaven, has recorded a curious case in the Medical Repository, of loss of speech and hearing in a child eighteen months old, who had been suddenly seized with convulsions: her vivacity remained, and her health was unimpaired. She continued in this state until her sixteenth year, when, after the noise of a public rejoicing, she was observed to recover the sense of hearing, and she soon began to articulate.

"There is much difficulty in establishing clear distinctions between the various species of nervous affections: they pass into each other imperceptibly in many cases, and the line of distinction is scarcely to be defined. There is a strict analogy between epilepsy and simple convulsions; the muscular system is in each disorder affected in a very similar manner. An attack of epilepsy, however, commences and terminates by a state of stupor and dulness, which for a time destroys the senses and intellectual faculties. Such is not the termination of convulsions, properly so called. From whatever cause convulsions may occur in highly irritable children, the attack may run into true epilepsy, idiotism, or paralysis. Epileptic paroxysms also return without any obvious cause, and are frequently periodical. The cause of simple convulsions, on the contrary, may generally be determined. The periodical return of the accessions of many nervous diseases, is a subject of considerable interest, and one which is very little understood. Dr. Pitcairn relates the case of a man of thirty years of age, who, from the age of nine years, experienced each year, in March and September, at the commencement of a new moon, a convulsive attack of the right arm. I have at this moment a case under my care, of a young lady, who has been seen by many practitioners, and amongst others by my friends Messrs. Arnott and Ward, who for three years has been affected with a remarkable convulsive cough, which commences in November without any apparent indisposition. It ceases as suddenly as it begins, but has lasted for several weeks at each attack. In this case there is a trifling distortion of the spine. The head is of a remarkable shape; there is also slight strabismus." (P. 18—21.)

At page 25, it is stated that convulsions rarely appear during the night, owing to the patient being removed from the various stimuli which excite them. This is an important observation, as it is directly opposite to what we observe in true epilepsy; the fits coming on more frequently during the night, or just after waking, than at any other period.

The *proximate cause* of convulsions next comes under consideration, and it is no reproach to the author that he has failed in throwing any additional light on this obscure point of pathology. It is asserted that, in the great majority of cases, convulsions are symptomatic; and in this, as already mentioned, we fully concur. But the second part of the position, that "it

might probably be asserted with accuracy that they are never idiopathic," requires some discussion.

"Such certainly has been the result of my own observation, although I am diffident of stating decidedly an opinion in opposition to the many authorities of high respectability who adopt the above division. When the brain is acted upon immediately by any cause, and convulsions supervene, they are considered to be idiopathic; but, in such cases, the convulsive action is secondary to some deviation from the natural condition of the brain, and is therefore, in point of fact, as strictly symptomatic as if it were the consequence of derangement originating in some distant organ, and subsequently reflected upon the brain. From the imperfection of our knowledge, or the carelessness of our inquiries, the derangement of which convulsions are symptomatic no doubt frequently escapes detection, and the attack is looked upon as idiopathic." (P. 29, 30.)

According to this explanation, there certainly can be no such thing as an idiopathic convulsion; for, as the muscles derive their motive powers from the brain and nerves, so it is obvious that "some deviation from the natural condition" must invariably precede their supervention. We apprehend, however, that, when we use the terms symptomatic or sympathetic, we always imply a distinct relation to some other disease, and not that "deviation from the natural condition" which proves the immediate forerunner of the convulsions, and which may be regarded as their proximate cause.

It is stated, as an undoubted fact, that the convulsions of children are much more frequent now than they have been at any former period; an assertion, by the by, which is made with regard to so many complaints, that we sometimes wonder how our ancestors ever came to fall sick and die. However this may be, we quite agree with the author in the following remarks on the impropriety of forcing the minds of children, by early culture, into precocious development, as is too much the fashion at the present day.

"We should operate upon the tender intellect of a child by the gentlest progression. It must surely be much more judicious to complete the instrument previous to its use, than to employ it in an imperfect state. It is the same with children as adults. In the cultivation of the mental powers, we are always to bear in mind the capability of the individual to answer the demands which are made upon him for exertion. It is not only irrational, but it is frequently destructive, to impose either upon the mind or body, but particularly upon the former, a load which it is incapable of supporting. It may be a source of consolation to those parents who are too apt to lament any apparent loss of time in the very early periods of life, to remember that early acquirements are not to be gained without destruction of health, and that the future progress

and mental powers of the individual depend upon the foundation which is laid in infancy, by judiciously adapting the studies of the child to its age and constitution. By premature efforts to improve the powers of the intellect, the organ in which they reside is exhausted. The practitioner, then, cannot too forcibly reprobate the pernicious enforcement of precocious studies. The injurious effects arising from the folly and false vanity of parents, who are ambitious of holding forth their children as specimens of extraordinary talent, are constantly presenting themselves to our view in a train of nervous symptoms, and of susceptibility to ordinary impressions, which frequently pave the way to decided paroxysms of convulsions." (P. 32—34.)

This injudicious system of keeping young people too long under the restraints required for their premature learning, seems to be an evil felt of old, and to which M. DE SEVIGNE probably alluded when she made the quaint observation—"Je suis persuadée que la plupart des maux viennent d'avoir le cul sur selle."

The following quotation will put our readers in possession of some of the most important of the author's views:—

"Both in children and adults, the effects which arise from any given irritation will depend upon the particular constitution and temperament of the individual. In one, local pain, unconnected with general disturbance, may ensue; in a second, an attack of fever may arise; and in a third, convulsions with or without pain or febrile movement. With whatever train of symptoms an infantile disease commences, or in whatever part of the body derangement of function or disease of structure may primarily be situated, the irritation endured by that part may be reflected upon the brain, and convulsions may follow as a symptom of the cerebral reaction upon the muscular structure. The probability of the occurrence of convulsions will be determined by attention to the particular constitution of the patient. The character of the original disease may vanish, and the treatment at first required must be changed for one more directly appropriate to the transition which has taken place. But, although we are to bear steadily in mind the possibility, and even probability, of convulsions being produced by some serious cerebral disease, it is equally important that we should not hastily determine that the brain is organically, or even functionally, affected, because a paroxysm of convulsions occurs, or prognosticate the speedy effusion of water in the ventricles, unless enormous doses of calomel are prescribed, and repeated bleedings are had recourse to. Such a mode of practice has been recommended by high authority in several cases of convulsions which I have watched with much attention; and at the same time it has been confidently asserted, that hydrocephalus would ensue if any part of the plan of treatment were omitted. A much more moderate, and I think more rational, plan has been adopted, and the children have perfectly recovered. Unless they arise from mechanical violence or intense moral impressions, idiopathic affections of the brain are, I conceive, very rare in children. I by no means agree with the

opinion expressed by the French physicians,* that, when convulsions are symptomatic of encephalic inflammations, it is almost always the case that some evident cause has been applied, which has acted mediately or immediately upon the head, and from which inflammation almost certainly arises,—such as blows, violent concussions, falls, &c. &c. Convulsions quite as frequently occur during inflammation of the brain, which is produced by sympathy with some distant part that is highly irritated. It is also said by the same authority, that there is a well-marked difference in the convulsions themselves, when they arise from affections of the head. It appears to me, when a paroxysm of simple convulsions is once excited, whatever may have been the cause of it, that it is essentially the same, although it may differ much in its degree of violence and duration.

“It is a frequent and a fatal error in the practice of the present day, to seize upon some individual symptom, such as slight strabismus, partial convulsions, or a crouping noise in the breathing, and to determine that water in the head will inevitably be the consequence, unless a particular and formidable treatment be employed. Each and all these symptoms may, however, arise where we have no reason to suspect any affection of the brain.” (P. 47—51.)

It is a very common idea that the desiccation of cutaneous discharges proves a frequent source of convulsions: probably this opinion has been carried somewhat too far, even in this country; and in Germany, the importance attached to it is most extravagant, repressed, or imperfectly developed; itch being held by some in that country to be the immediate cause of almost all diseases under heaven. The author before us “doubts” (and we participate the doubt,) whether convulsions are ever produced by the natural or artificial disappearance of eruption, provided a moderate action has been kept upon the bowels. But we cannot go along with him in what follows, although he is backed by the authority of most writers. We allude to the generally received doctrine, that occurrence of convulsions on the supervention of exanthematous fever, particularly small-pox, was a favourable omen. “From my own experience, (says Mr. North,) I should infer that this opinion is well founded, provided the eruption makes its appearance at the usual period from the commencement of the premonitory symptoms.” All our own experience is opposed to this, and we have learnt to look upon convulsions, under the circumstances alluded to, as indicative of a very severe disease; and all we can venture to say is, that a convulsion fit previous to, and followed by, the eruption of an exanthem is (*cæteris paribus*) not so dangerous as a fit from any less obvious or more perma-

* Rapport sur les Prix xxxi. prefixed to Brachet's Mémoire sur les Convulsions des Enfans.—Paris, 1824.

nent cause. BAUMES, in his work "*sur les Convulsions dans l'Enfance*," lays down the occurrence of convulsions previous to the supervention of an eruptive disease, as justifying the prognosis of a fatal termination.

Among the alleged causes of convulsions, almost every writer has enumerated worms; but we agree with Mr. North in regarding this as a much less frequent cause than is generally imagined: he states that he does not remember a single instance where convulsions appeared to depend upon the presence of worms in the intestines, or to be relieved by their expulsion.

Leaving the causes, we now come to the *symptoms*; and any one who has been accustomed to see much of the diseases of children, will recognise the fidelity of the following picture:

"From whatever cause a great predisposition to convulsive affections exists in children, the following symptoms are usually characteristic of that state of increased irritability from which their occurrence is to be anticipated. Although it cannot be said with truth that the child is ill, he is evidently threatened with disease. It will be observable, that during the day he starts with apprehension at the most trifling noise. His sleep is disturbed with sudden cries. Not unfrequently he sleeps throughout the day, and remains restless and entirely sleepless during the night. Whatever might have been the natural placidity of his temper, he now becomes peevish and irritable; quarrels with his companions; and derives either no pleasure at all, or but a momentary amusement from his most favourite playthings, which will be suddenly thrust away after having slightly occupied his attention. The eyes are frequently fixed, without being apparently directed to any particular object; or they are thrown upwards, and are stedfastly fixed upon the ceiling. The pupil of the eye is sometimes for a moment contracted, and then suddenly dilated. I have frequently held a candle close to the eye of a child, when I have anticipated the occurrence of convulsions, in order to remark the effect produced. In some instances, where the pupil has been contracted, at the moment the light was applied it has suddenly dilated, and as suddenly again contracted, the light being steadily held close to the eye. The effect of light upon both pupils is not always similar. One may remain fully dilated, while the other contracts; or one pupil may remain stationary, the other being alternately contracted and dilated. I am not aware that the remark has been made before; but I believe, from frequent observation, that when a light is applied close to the eyes, and the same effect is not produced upon both pupils, that we have much reason to fear some serious affection of the head. It is now, I believe, generally admitted that the mere dilatation or contraction of the pupils is dependent upon so many and dissimilar deviations from health, that no particular inference can be drawn from either of these conditions of it. An oscillatory motion of the pupil is very frequently one of the indicative symptoms of approaching convulsions.

"It is always useful in diseases to examine the position of the limbs

during sleep, particularly the sleep of children. If they deviate from the ordinary degree of flexure to the more straight position, there is generally some irregularity in the state of tone, and of course in the vital influx. Upon viewing the position of a child during sleep, whom, from the occurrence of symptoms above mentioned, we consider disposed to convulsions, we shall frequently find the limbs almost rigidly extended, the great toes and thumbs being turned inwards. Stretching of the limbs, it is true, is both in adults and children a natural action, which is exerted to restore muscular equilibrium. In connexion with several of the other premonitory symptoms, however, it must be considered as a strong indication of a tendency to convulsive movements.* The colour of the countenance varies frequently in children strongly predisposed to convulsive paroxysms: at one moment it is pale, at another highly flushed. No corresponding variation of the temperature of the surface of the body is to be detected. For a short time the countenance of the child is expressive of great animation; the eyes are vivid and glassy in appearance. Suddenly, and without cause, he appears languid and inclined to sleep. The breathing is irregular. The child frequently draws long and deep inspirations with apparent difficulty, and these are alternated with a short and catchy breathing. This disordered respiration I consider to be peculiarly indicative of approaching convulsions. It is usually accompanied by a fulness of the upper lip and a contracted appearance of the nose, which alter the natural expression of the countenance. The hands are frequently directed towards the nostrils, apparently without any voluntary effort. If we observe the fingers of a child highly disposed to convulsive diseases, we shall see them either in frequent and sudden motion, or firmly pressed towards the palm of the hand. The thumb is more frequently contracted upon the palm, the fingers at the same time being extended and separated from each other. In a discussion which lately took place at a medical society upon this subject, it was contended, by an accoucheur of much celebrity, that this contraction of the thumb is not to be regarded as a premonitory symptom of convulsions. From my own observation, however, I can state that, in children in whom we detect this firm contraction of the thumb, convulsions will almost certainly occur at some subsequent period; unless, indeed, the suspicion of the practitioner is roused, and appropriate remedies ward off the threatened attack. When the child is put to the breast, it sucks eagerly for a moment, and ceases suddenly, throwing back the head with an expression of anxiety in its countenance, and perhaps rolling it from side to side. Deglutition appears to be performed with difficulty when these symptoms occur." (P. 69—75.)

The injurious effects of over-feeding are fully and forcibly exposed: "so long as nurses and mothers believe that children thrive in proportion to the quantity they eat, so long will convulsive diseases be frequent and severe." There can be no possible question—at least with any practitioner of common

* Good's Study of Medicine, vol. iii. p. 303.

sagacity—that children ought to be fed on plain unstimulating food, while they ought never to be permitted to overload the stomach even with this; and that, under ordinary circumstances, the breast of the mother ought to afford the exclusive nourishment of infants. Where, however, the mother is prevented from suckling, the greatest care is required in choosing a substitute; and numerous instances are alluded to by Mr. North, of convulsions and other serious injury resulting to the child from the unhealthiness of the nurse.

The improper use of certain patent medicines, containing opium or some other narcotic, is pointed out, and no doubt with justice, as favouring the occurrence of convulsions.

It is maintained by some that dentition, being a natural process, cannot with propriety be enumerated among diseases. However this may be, no one who knows much about children will deny that the process frequently gives rise to various diseased actions. In this respect it is precisely on the same footing as parturition, which, though a “natural process,” proves the exciting cause of many inconveniences, and not a few morbid affections.

“It was supposed by the ancient physicians, and the same opinion is supported by a few modern authorities, that children never die from the effects of difficult dentition. If we allow, with Wickmann and others, who have urged the impossibility of disturbance to the system from painful dentition, that the gums are senseless, or provided with no particular sensibility, we are not compelled to grant that these parts are deprived of sensation during dentition. In health, bones and cartilages possess little or no sensibility. In disease, they become exquisitely painful; and, although the process of dentition cannot be considered in every case a disease, it is subject, like every other natural operation, to accidental disturbance, which will be productive of local and general suffering. In Germany it is a current opinion that children rarely, if ever, suffer from the effects of dentition. The disturbance which so frequently occurs during the progress of dentition, is attributed by the practitioners of that country to other causes: hence they rarely, if ever, advise division of the gums.* Many children must undoubtedly be the victims of so erroneous an opinion. It is difficult, indeed, to reconcile the maintenance of such a doctrine with the character which the German practitioners bear for the accurate investigation of the causes and symptoms of derangements of health, and for the industrious zeal with which they add to their own stores of information from foreign sources. That children do suffer considerable distress during the process of dentition, is certain; and that the pressure of the tooth upon the nerves of the part is frequently the cause of the severe train of symptoms and convulsive paroxysms under which they labour, must be

* WICKMANN, *Ideen zur Diagnostik*. HECKER, *Magazin für die Pathologische Anatomie*.

equally clear, from the almost instantaneous cessation of suffering when the gum is freely divided. It cannot be doubted that, if assistance were not afforded by this simple but effectual operation, children would frequently sink under the consequences of painful dentition." (P. 108, 110.)

Among the appearances found after death, vascular turgescence at the roots of the nerves, effusions, inflammations, &c. &c. are enumerated. Sometimes these have been found in the cerebrum or cerebellum, sometimes in the spinal cord; but it is observed, that it may be doubted whether these appearances may fairly be regarded as the causes or effects of the convulsive paroxysms.

There are some good remarks relative to *prognosis*, which we shall give at length:—

"It is frequently difficult to determine either the duration of a convulsive paroxysm, or the ultimate consequence of its frequent repetition; and we shall therefore be rarely justified in giving a certain prognosis. Sometimes the most violent and frightful paroxysms pass off without inflicting any serious injury, either upon the present or future health of the child. In other instances the attack, apparently slight at its commencement, either destroys the child in a few moments, or paves the way for its subsequent death, by entirely destroying the powers of mind and body. It follows, then, that, although there are no diseases more likely to excite terror than convulsive affections, the danger is not to be estimated by the apparent violence of the attack. Our prognosis must not be positively guided by the external appearances or degree of the convulsive movements. We must consult rather the cause of the convulsions, and the nature of the disease of which they are symptomatic. The constitution of the child must also be considered. The danger is much less in a child of great susceptibility, than in a robust subject, who is less easily excited. In the former, convulsions will occur more readily: in the latter, they will be infinitely more severe. The younger the child, the less is the danger we are to apprehend from convulsions. In very early infancy, an equal degree of danger attends the convulsive affections of both sexes. After that period, girls are more subject to convulsions, and less seriously affected by them, than boys. In children of a sanguine temperament, the attack is commonly violent, and passes quickly to a termination, whether it be fatal or not. In the opinion of Brachet, convulsions arising from external and mechanical causes are less severe, unless some important organ has been injured, which accident in itself constitutes the danger. My own experience would induce me to give a contrary opinion.

"Convulsions which arise from irregularities of diet, are generally severe and hazardous. If convulsions are caused by exposure to cold, their degree of severity and the danger will depend upon the extent to which the brain is affected. Congestion in the vascular system of the head is much to be feared in such cases. If any sudden moral emotion is productive of convulsions in a child, the attack is in general slight and

transient. I have mentioned, at page 85, one fatal case arising from fear. Convulsions occurring during the course of any severe disease, strongly indicate its danger. Recovery is very doubtful if the intellectual functions suffer. "*Sensus etiam suppressi majus periculum in omni spasmodum genere, quàm integri ostendunt.*" (VOGEL.) Partial are less dangerous than general convulsions. The more frequent the return of the convulsive attack, the greater is the probability of a fatal termination. It is a well-known fact, that convulsions are infinitely more common and more dangerous in hot climates than in the more temperate regions. Cases occasionally occur in which convulsions appear to mitigate the severity of any existing disease. Brachet very justly ridicules the endeavour of Sauvage to prove that convulsions are always beneficial.

"We have yet to learn how to determine positively when convulsions do arise, and when they do not, from organic lesion of the brain, or from effusion of water into its ventricles. When the convulsive attacks are slight and of short duration, and are succeeded by the natural cheerfulness of the child, we have but little reason to apprehend any danger. On the contrary, when the paroxysms are of long continuance, and gradually increase in severity and violence, and leave the child dull and heavy, we have much cause to apprehend a repetition of the attack, and should give a guarded opinion as to the ultimate consequences. In all cases which I have myself witnessed, where the child was destroyed suddenly during convulsions, the dark colour of the face and neck, and the almost stertorous breathing, indicated a state very nearly allied to apoplexy in the adult. I have unfortunately not been permitted to verify the accuracy of this supposition by dissection: that it is well founded, however, I think there can be but little doubt. Death may occur also in consequence of the respiration being impeded by the irregular contractions of the respiratory muscles. The lungs become engorged with blood, and the circulation through them is impeded. Suffocation is quickly threatened, and destroys the patient, unless the natural action of the muscles is restored, and the respiration and circulation are enabled to proceed without interruption. In some cases a state of syncope supervenes to convulsions, from which the child never rallies. It is much to be apprehended that in some cases where a state of syncope has supervened to convulsive paroxysms, that most horrible of all accidents has occurred—premature interment. However sceptical we may be as to the truth of many of the cases which are recorded, it must be admitted that there are some instances, which rest upon very credible authority, of women and children who have very narrowly escaped being consigned to the grave before the vital spark was extinct." (P. 124—130.)

Treatment of convulsions.—As the causes which excite convulsions are both numerous and dissimilar, it is obvious that the treatment cannot be always the same, but must vary with varying circumstances. During *the fit*, indeed, but little can be done, and that little is had recourse to rather with a view to

satisfy the friends and gain time, than from the expectation of its producing any very decided effect. The warm bath is generally recommended, and it is in most cases the best mean we can employ. With this may be joined frictions on the chest, belly, and spine, with some stimulating and anodyne liniment; and a purgative glyster may be thrown into the rectum. All attempts during the paroxysm to force the child to swallow medicines, are for the most part unavailing, and frequently injurious: as a general rule, they ought to be avoided. It becomes a question, however, of interest, and it must be confessed of some difficulty, to determine whether we ought or ought not to abstract blood. Mr. North informs us that, "if there are evident marks of determination to the head, blood should be drawn from the jugular vein;" but, on the other hand, we are cautioned against taking away blood during a convulsive fit, merely with the intention of relieving its violence.

Dr. BROWN, of New Orleans, has advised the application of gradually increased pressure upon the stomach, or of a light roller round the abdomen. We have no experience of this ourselves, nor does the author do more than mention it.

Our readers may remember that Dr. Currie speaks very highly of the effects of the cold bath; but his recommendation has never been generally adopted. It will be kept in mind that we speak of the treatment *during* the paroxysm.

In this, as in every other disease, it is a matter of the first moment to detect the cause, that our treatment may be regulated by rational principles. "If the child is robust and of a plethoric constitution, with the head hot and disproportionately large, the carotids throbbing, the countenance flushed, the eyes sparkling and projecting from the orbit; if he sinks into a state nearly approaching to coma, after any unusual agitation, we have reason to fear a hazardous determination of blood to the head, and must proceed accordingly." (P. 145.) By proceeding "accordingly," however, the author does not mean that we should adopt the usual practice of putting leeches to the temples. "I must be allowed to declare my utter want of confidence in the practice which is recommended by almost every authority. I allude to the application of a few leeches to the temples. I have never seen well-marked symptoms of determination of blood to the head in children removed by leeches, however freely they were applied." (P. 146.) We cannot agree with the author in this doctrine: in what is called *determination*, we suppose the diseased action to be short of inflammation, and we have found the application of leeches at once the most simple and most effectual method of affording relief.

Mr. North, however, prefers opening the jugular vein, or cupping behind the ears; and that these produce more speedy depletion, and are therefore to be preferred in inflammatory attacks, there can be no doubt.

The author does not speak favourably of bleeding in the arm; and, not content with expressing his own disapprobation of the measure, he indulges in a gibe at those who recommend it:—"That physicians should speak of the performance of the operation with confidence, is not a matter of astonishment. Their part of the duty is not difficult; they order, but have not to act." (P. 148.) Now, we are quite aware that this, like many other things, is "easier said than done," and that the operation is attended with more difficulty than in the adult; at the same time, that it may often be practised with success, admits not of doubt. We ourselves question whether venesection possesses any decided advantage over cupping; but, if the physician thinks bleeding from the arm a measure likely to be of use, it is his business to order it, and it rests with the surgeon to say whether it is or is not practicable in any given case.

The quantity of blood to be taken must depend entirely upon circumstances, and the author does not attempt to lay down any "precise and dogmatic rules." After bleeding of any kind, the child is to be kept as quiet as possible, to avoid the nervous irritation which is apt to supervene.

The bowels, as a matter of course, are to be kept open, and this may best be done by "proper doses of calomel combined with jalap." But the author "entirely disapproves" of those large and frequently repeated doses of calomel which are so often had recourse to, and to which the name of *heroic* has most absurdly been applied.

Cold applications to the head are much commended, and the necessity of taking care that such applications are *bona fide* cold, and not consisting "of a damp rag which has perhaps been intentionally *warmed* by the hands of the over-officious nurse," is very properly insisted on.

Blisters are next spoken of; and, as the opinions expressed are very different from those generally entertained, we shall lay them before our readers.

"I am far from partial to the application of blisters to children; but I apprehend that the principle of counter-irritation, upon which they have been recommended to be applied to the lower extremities, has been unjustly ridiculed. In many cases where there was evident determination of blood to the head, without any general excitement, (which is a state we constantly observe in children,) I have seen the best effects produced by following the advice of Dr. John Clarke, and applying blisters to the calves of the legs or between the shoulders. Blisters to

the head are decidedly prejudicial, although they are not unfrequently applied by practitioners of experience. They certainly keep up a discharge from the integuments of the head; but this effect can only be produced by increasing the arterial action within the cranium." (P. 158.)

In this paragraph it will be seen the author expresses himself against blisters, except under certain restrictions; but, in another place, he indulges in a regular philippic against them.

"If I may venture to express an opinion which has been impressed upon me by repeated observation, notwithstanding it is in direct opposition to all the doctrines I have heard maintained in the medical schools, I should say that, if blisters were never applied to children in any case whatever, much less evil would arise from the want of them, than is in common practice daily, or perhaps hourly, inflicted by this popular and painful practice. What can be more unjustifiable than the language which we constantly hear employed upon the subject of blistering children. It is in the mouth of every old woman, and of some practitioners too, that 'a blister is a fine remedy, and that at least it can do no harm.' Is the infliction of many hours' torment no harm? When a remedy is evidently applied without any settled principle, it is a subject of fair inquiry to investigate the claim it has to our confidence. If a child is in a state of coma from presumed oppression of the brain, and if the practitioner wishes to excite every organ to increased activity, and to rouse the nearly extinguished powers of life, he applies a blister, and perhaps with benefit. This is the only condition in which we can look with any degree of reliance upon blisters in infantile diseases, and in which we need not be apprehensive of any bad effects. But the very same practitioner, if he has to treat a case of local inflammation,—pneumonia, for example,—will seek assistance from the same remedy. The disease itself is productive of much general irritation, and of considerable local distress. Whatever is likely to act as a stimulus must be prejudicial, although we may be obedient to the instructions of allaying the severity of the attack by bleeding, &c. before we have recourse to blisters. In the latter case, the condition of the patient is totally the reverse of the former. If, in the comatose state, a blister acts beneficially as an excitant, it must be prejudicial in the other, for the same reason. I confess I should leave entirely out of the question the benefit it is presumed we derive from the counter-irritative effects of blisters, when applied to young children. Excepting in the particular cases I have referred to, I believe with much confidence that the advantage from blistering is rarely equivalent to the pain and general irritation it produces. The period at which we apply blisters in local inflammatory affections, is not to be forgotten. We first subdue the severity of the disease by other and appropriate remedies, and, when it is upon its decline,—when, in all probability, the unassisted powers of nature would successfully perform the remainder of the task,—a blister is applied. The patient gets well, notwithstanding the additional pain thus inflicted; and the fortunate result of the case, which is really to be

attributed to the measures previously employed, is said to be owing to the good effects of counter-irritation, &c., and the blister gains a character to which, in point of fact, it has no claim." (P. 202—206.)

It is acknowledged that, if a child is in a state of coma, a blister may be of service; but it is asserted that in a local inflammation, pneumonia for example, the same remedy will be applied; whereas "if, in the comatose state, a blister acts beneficially as an excitant, it must be prejudicial in the other for the same reason." We would remark with respect to the coma, that, in the great majority of cases, it is the result of increased vascular action which has ended in effusion, the reabsorption of which frequently appears to be promoted by the application of blisters. With regard to the pneumonia, it certainly is not customary, with practitioners of any experience, to have recourse to these remedies until the inflammation is on the decline; and, as effusion into some of the pulmonary textures is the most frequent termination of this disease, by which the functions of the lungs become impeded, so it appears to us that we employ blisters for the same purpose in both cases; viz. to remove those effusions which are apt to follow increased vascular action, whether this may have been confined to simple determination of blood, or passed into actual inflammation; we would, therefore, be disposed to reverse the proposition of the author, and to say, that "if in the comatose state a blister acts beneficially as an excitant, it must be *of use* in the other for the same reason." We do not speak of the effects of blistering children without some experience, and we have no hesitation in giving it as our opinion that, in inflammation of the chest, as soon as there is evidence of the increased action relieving itself by effusion, blistering becomes a powerful auxiliary. At the same time it is to be kept in mind, that the greater vascularity of the cutis in children renders the stimulus of the blister necessary for a much shorter time, and that, as a general rule, the plaster ought to be removed as soon as any distinct redness is produced: this, in children under three years old, generally takes place in three hours, and scarcely ever requires more than five. By attending to these restrictions, we have never, in our own practice, seen sloughing produced; and, as the patients generally got well, we have as much right to suppose that their recovery was promoted by the blisters, as Mr. North can have in attributing it to "the measures previously employed."

When, however, we have had recourse to depletion in the usual way,—that is, when we have abstracted a quantity of blood proportionate to the age of the child; when we have acted upon the bowels, and enforced a rigorous diet; we shall

find, notwithstanding, that a return of the convulsions will frequently take place: the increased vascular action and local determination have given way to a state of general irritation; a state, to obviate which very different remedies are required.

“The child will be sleepless, exceedingly fretful, the pulse rapid and small, and slight twitchings of different muscles and tendons will be detected, if strict attention is paid. For a moment or two the carotids will beat violently, but this increased force will suddenly be followed by a very languid action of them. The countenance is generally pale and distressed, and the brows are wrinkled. Pain in the head is rarely complained of, if the child is old enough to express its feelings. In this state further depletion is certainly not demanded, although it is frequently practised: it will not only be unnecessary, but absolutely prejudicial. The severity of the symptoms will increase in an equal ratio with the employment of debilitating measures. What are the means, then, which we are called upon to pursue under such circumstances? In my opinion, the exhibition of sedative medicines is imperiously demanded; and I believe small doses of the pulv. ipecac. comp. is the best remedy. I have frequently given the extract of hemlock or henbane, in conjunction with alkalies, with much advantage. These medicines, however, sometimes fail to relieve the irritable state above mentioned, when Dover’s powder will succeed.” (P. 162—164.)

The third and fourth chapters treat of *Infantile Epilepsy*. Into neither of these will our limits permit us to enter: they contain a very fair view of all that is known upon the subject, but the author has no new theory to bring forward, while he has had too much experience to vaunt any remedies as infallible.

The fifth and sixth chapters, which complete the volume, relate to a *spasmodic affection of the chest and larynx* in young children, accompanied by general or partial convulsions. This is a condition which, we believe, is frequently confounded with croup, from the shrill and sonorous respiration which accompanies it; and we know of an instance in which a nurse has gained credit for having cured a child of the croup five times, by means of the warm bath and castor-oil. Our readers will find the original papers of Mr. North upon this subject in the fifty-third Volume of this Journal, pages 39 and 284, which would render it a work of supererogation for us to resume the discussion.

We may be permitted to remark, however, that it is by no means the least interesting part of the volume; and that, in our opinion, he satisfactorily establishes that this crouping noise in the throat, with drawing inwards of the thumb, &c. is not necessarily connected with any organic disease in the head; and, consequently, does not require the same degree of activity in the treatment which this view of its pathology would demand.

DIVISION II.

FOREIGN.

ART. II.—*Traité Elementaire de Diagnostic, de Prognostic, d'Indications Therapeutiques; ou Cours de Medicine Clinique.* Par M. L. ROSTAN, Medecin de l'Hospice de la Vieillesse (Femmes), ci-devant Salpetriere; Professeur de Medecine Clinique, &c. Tome premier.—Paris: chez Beschet, jeune, Libraire. 1826.

An Elementary Treatise on Diagnosis, Prognosis, and Therapeutical Indications; or a Course of Clinical Medicine. By M. L. ROSTAN, senior Physician to the Salpetriere; Professor of Clinical Medicine, &c.—Paris: Beschet, the younger. 8vo. pp. 587.

THIS book, although, from its elementary nature, it is not adapted for critical analysis, nevertheless contains too many valuable practical remarks, the result of attentive observation and considerable experience, to permit us to pass it by in silence. It is not ushered into the world by any preface or advertisement whatever; nor are we even informed to what length the whole work is likely to extend. It would seem as if M. ROSTAN considered the sanction of his name as quite sufficient to fix the attention of the profession to his performance; that he was under no necessity to explain his motives or design to his readers; and still less to make any apologies for omissions or imperfections, which indeed are but too often mere words of course.

It is not our intention to go through this volume page by page: it is sufficient for our purpose to say that the first part is entitled *Prologomena*, and contains general remarks upon the organisation of functions of the living animal in health and disease; upon the utility of clinical medicine, the advantages of pathological anatomy, the object of medicine, and other matters purely elementary. This first *part* (which term our author employs in the sense usually applied to the word *chapter*,) occupies ninety-six pages.

The second part treats of *Diagnosis*, and commences with these general considerations:—

“Independently of the knowledge of man in a healthy state, three things are indispensable in order to form a just diagnosis:—1st. A knowledge of those changes which take place in the functions or organs, and this constitutes *symptomatology*. 2dly. The proper appreciation of each of these phenomena; in other words, the knowledge of what they *signify*: this is *semiology*. And 3dly. A knowledge of the characters of the different diseases which afflict humanity; of the features which distinguish one from the other: this is especially called *diagnosis*.”

The greater part of this chapter is made up of arguments to prove the necessity of attending to pathological anatomy, and

the absurdity, or worse than absurdity, of prescribing merely from symptoms. Of the mode in which our author treats this part of his subject, we shall offer the two following examples:

“Do you wish to have (says M. Rostan,) a striking and novel example of the vicious nature of this plan? [*la medecine des symptomes*,] we shall find it in palsy. It is not long since we were ignorant, and many seem yet not to know, that palsy is merely a sign of some alteration in the brain or its appendages. Pathological anatomy has placed this beyond all doubt. Well, then, what was the practice? They rubbed and inflamed the affected limb, in order to bring back its feeling or function. If this was of no use, at least it was harmless. But at length somebody thought of giving *nux vomica* to an animal, and it was then observed that the hinder limbs were affected with convulsions, and thence it was concluded that this remedy would work miracles in cases of paraplegia commonly called nervous. Soon afterwards it was given in hemiplegia: it was observed to produce convulsions in the paralysed limbs, and therefore it was supposed that it would restore their motion. If these physicians had but known that these symptoms were only the effects of a local disease of the brain, either acute or chronic, they would have seen that the method proposed of agitating the affected limbs, could only do so by acting upon the diseased part of the brain, and therefore would rather hinder than facilitate a cure. They would have seen that exciting the motion of limbs in such a case, was exactly parallel to that of rubbing the extremities of broken bones against each other, in the hope of consolidating a fracture. They would also have seen that a palsy depends upon eight or ten different diseases, and therefore it was absurd to combat them by the same means.” (P. 111.)

Take another example:—

“The efficacy of prussic acid in consumption has been proclaimed. One would have believed that these authors have thought that pulmonary consumption was always one and the same disease, or that they had determined in what particular species the prussic acid was available. Not at all. Whatever the species of phthisis was, the prussic acid was always excellent, and the servile crowd of imitators continued to extol and employ it.”

From the first chapter on *Symptomatology*, we shall make but few extracts, since the greater part consists merely of an enumeration of the functions deranged, and the mode in which they are found to be so. We, however, shall translate the introductory passage, and then proceed more at large to discuss the *signs* deducible from each of these symptoms in succession.

“Every morbid change (observes M. Rostan,) which takes place in the organisation is called a *symptom*: these changes manifest themselves both in the organs and in the functions which they execute. From an alteration of function, we may conclude that there is a change in the organ to which the function is confided. When by this means the condition of the deranged organ is recognised, as well as what the lesion

is, the *symptom* becomes converted into a *sign*. This phenomenon having led us to recognise the disease, has acquired a *meaning*. Our senses alone enable us to ascertain symptoms; in fact, they are equally apparent to those unacquainted with the art of medicine: all the world knows what a pain in the side is, but it is only the physician who is aware of its *signification*. The changes which our senses make us acquainted with in disease are, in the organs, either in their augmentation or diminution, (*hypertrophy, atrophy,*) their consistence or temperature, alterations of form, position, colour, smell, and sound. The complete abolition of an organ is rarely an effect of disease. With regard to the function itself, these changes may be reduced to augmentation, diminution, perversion, or complete abolition. The results of the functions,—that is, the matter secreted and excreted, also demand the attention of the physician. Regard must also be had to their augmentation, diminution, perversion, and abolition. The whole of symptomatology is included in this short exposé, and there only remains to make the application to all organs and functions in a physiological order." (P. 122.)

This, as we before said, is the object of the remaining pages of this chapter, commencing with the organs of digestion, and ending with those of generation. The fourth section, however, becomes of practical utility, and we shall resume our extracts from thence.

"Nothing is, perhaps, more embarrassing (we quote M. Rostan's words,) to a young physician who has just begun to exercise his profession, than the mode of examining and interrogating a patient. The first thing which occurs is, of course, an examination of the external state: the physiognomy almost involuntarily fixes the attention in the first place, from which we can judge of the age, strength, and the state of the patient's mind; circumstances of the greatest importance in forming a correct prognosis, and in establishing the indications of cure. This examination must not be confined to the head only, it must extend to all parts of the body; by which we form a judgment of the stature, make, colour, conditions of eruption, marks of wounds, deformities, &c. Unfortunately this scrutiny is necessarily much limited even in hospital practice, and in private life it is impossible, in the majority of instances: however, an attentive examination of a part *in pain* is necessary to enable us to avoid committing serious mistakes."

The following example is given:—An aged female, of weak intellects, was received into the infirmary; she complained of a severe pain in the abdomen, towards the left iliac fossa. The countenance was lively, the pulse strong and frequent, the skin hot and perspiring, the tongue dry, with great thirst; in other respects, the digestive functions were in a healthy state. The pain in the abdomen was aggravated by pressure or motion. M. Rostan gave the following diagnosis:—The phenomena of reaction announce an acute inflammatory state; the local signs show that the abdomen is the seat of the disease; but, as the

digestive functions are healthy, it is evident they are not affected. The slightest pressure is painful, therefore the disease is superficial; motion is painful, therefore the motive powers are affected, *the muscles of the abdomen are the seat of the disease*; although it is true that rheumatism in old people does not usually give rise to general symptoms so strongly marked.

Satisfied with this opinion, our author quitted the patient, after prescribing some simple remedies; when a pupil, raising the patient's shift, discovered an eruption of zona, (*herpes zoster?*) This lesson taught M. Rostan the propriety of applying to his senses, as the only means of positive instruction.

M. Rostan is disposed to condemn tedious interrogations, entering into tedious minutiae, and observes that, in some diseases of the respiratory organs, for example, too much talking is a great evil in itself. The same remark applies, perhaps with more force, to affections of the brain. The first question to be put to a patient is, "Where are you in pain?" for, as patients have always a disposition to give us their own opinion of their complaints, it is very unwise to ask merely, "What is the matter with you?" You may perhaps receive for answer, "I have a nervous complaint." The next question of importance is, "How long have you been ill?" This resolves the disease into acute or chronic, and narrows the circle of after inquiry very much.

Having made ourselves acquainted with the affected function, it is necessary to examine those parts which are either influenced by or exercise an influence over the diseased part; by this means we arrive at the knowledge of sympathies, and we are also enabled to detect concomitant maladies; for it often happens that many diseases exist in the same individual, and therefore we may commit a fatal error if we are contented with having detected one only.

We omit the methods of employing percussion and mediate auscultation in diseases of the chest, as described by M. Rostan. They have recently occupied a considerable share of our attention, and the method of instituting these inquiries is now sufficiently familiar to the profession.

Some remarks upon the method of feeling the pulse next ensue; and here we are warned not to be too precipitate in this part of our examination, since the very arrival of the physician will often have an effect on the circulation.

Many very just observations occur on the subject of investigating the condition of the viscera by pressing upon the abdomen; but there is nothing particularly worthy of extraction either in this portion of the section, or in that which relates to the examination of the mouth and fauces, and the condition of

the uterus; and further on the means of detecting feigned diseases, and those in which the patient has either entirely or in part lost the power of detailing his feelings and symptoms.

After having concluded our examination, it still remains to inquire into antecedent circumstances, which have operated as causes of disease: first, whether it is hereditary or acquired; whether it has now shown itself for the first time;—if it has been met with before, what remedies were then employed, and with what effect;—and, finally, the age, sex, constitution, habits, and profession of the patient, must engage our attention.

Diseases do not always assume the same aspect at different times of the day; hence we are taught to make our investigations in the evening as well as the morning, and perhaps also, upon some occasions, in the middle of the day.

Even when death ensues, the labour of the observer is not finished: it is here that we are to search for the correctness of the physician's judgment. The examination of the dead body requires the same care and attention as the living patient: it ought, indeed, to be very scrupulously performed, because, when we have once destroyed the organs, we cannot refer to them again. There is much good sense, as well as candour, in the following paragraph, but, unless we had found it in the work of a Frenchman, we should have scarcely been disposed to give implicit credit to it.

“It must be allowed, that in France we are too rich in materials for instruction. We do not sufficiently appreciate the immense advantages of the examination of the dead body: we perform this operation with nonchalance and carelessness, and are far from drawing all the advantages from it which it is capable of affording. Observe with what eagerness foreigners, who are deprived of these precious researches, proceed to these investigations;—what pains, what minute attention, they bestow upon them; nothing escapes their observation. Do you suppose that Morgagni had any great number of bodies at his disposal? Certainly not; but he drew from those which he was enabled to obtain all the advantages possible; he did not forget to examine every thing with his own eyes, and the result has been the collection of a most precious store of facts.”

Now, as we said before, though these remarks apply, perhaps very justly, to the general study of anatomy in France, we think that M. Rostan scarcely does justice to his countrymen, as far at least as pathological anatomy is concerned.

In directing the method of examining the dead body, our author follows the plan laid down by M. CHOMEL, of commencing with the abdomen; which is especially proper if there be any suspicion of effusion or extravasation of any kind within that cavity. He directs us to reserve the examination of the spinal marrow to the last.

The physician is not only occasionally called upon to interrogate his patient, but he must take notes of the case, either with a view of after consultation, or in the event of his wishing to publish it. Now, the art of recording our observations is not a very easy one, according to our author; for he requires the observer not only to possess a profound knowledge of his art, but that he should also be provided with sagacity, be capable of close attention,—and that he should be likewise endowed with sensibility, taste, and even imagination. M. Rostan, conceiving that the necessity of these last attributes may perhaps astonish his readers, thus explains his meaning:—

“A cold observer, an impassive spectator of the ills of humanity, may perhaps be an exact observer, but, if he be not endowed with sensibility, touched with the sight of these evils, is it likely that he will describe what he sees with that warmth which gives a life and soul to description? Whence comes it that we perceive such a marked difference between the observations of different physicians? Whence does it happen that one overwhelms us with fatigue, whilst we peruse the other with the liveliest interest? Is it not because the one is totally void of taste, imagination, and sensibility.” (P. 230.)

This section concludes with a table, minutely pointing out all the circumstances to be considered in examining into the state of a patient; though our author very properly observes, that it is not necessary to go through the whole of these researches in every individual case. We should hope not, indeed; for the inquiries comprise every part and portion of the body, and amount to upwards of two hundred.

The second chapter occupies the whole remaining portion of the volume, and treats of *Semiology*. The art of converting symptoms into signs, is, says M. Rostan, without contradiction the most difficult part of the science of medicine. This art our author thinks has made great progress within the last ten years, and, among those who have contributed to its improvement, he especially mentions Laennec, Broussais, and Landré Beauvais. Indeed, throughout the work, our author very carefully confines his quotations and praises to his own countrymen, and appears to be perfectly convinced that the science is no where else so well understood.

Signs have been divided into *past*, *present*, and *future*. This division does not appear, however, to M. Rostan to be deserving of being preserved; and his objection applies to the first term of this division, to which, for obvious reasons, he prefers the name of *commemorative signs*, and they include the age, sex, constitution, habits of life, idiosyncracies, antecedent diseases, remedies that have been previously employed, &c. &c. The meaning and propriety of the terms *diagnostic* and *prognostic signs* is sufficiently obvious; but, says our author, there

is a great omission in all works on Semiology, which is that of *therapeutic signs*; for, a morbid phenomenon indicates that such a particular remedy ought to be employed, it becomes therefore an indication, or, in other words, a therapeutic sign. Diagnostic signs have been divided into common and proper; the latter are otherwise called *pathognomic*: these are, of course, the most valuable.

Those signs which M. Rostan calls *local* belong to this class. The former, which are more equivocal, belong to a great number of diseases. Those phenomena which occur during the course of a disease, but which are not essential to it, our author terms *accidents*. There are but few signs, observes M. Rostan, that are truly pathognomic; therefore a sign, however strongly marked, has but little value, unless fortified by others. Thus, a pain in the side is equally appertaining to any disease of the chest; but, if the patient at the same time has a bloody expectoration, the probability of his labouring under peripneumony becomes greatly increased: if percussion yields a dull sound on the side affected, the probability is again strengthened; and this becomes almost a certainty if respiration ceases to be heard at this part, or if, by means of the cylinder, the *crepitating rale* is heard. Then, in order to complete the diagnosis, the general phenomena of a strong frequent pulse, heat of skin, and thirst, are to be taken into the account.

The first section of this chapter commences with the description of the morbid phenomena of the various systems, in a regular order; the first being entitled *morbid phenomena of the apparatus of digestion, considered as signs*. M. Rostan introduces his details by the following judicious remarks:—

“ Let us never forget that an alteration of function announces an alteration in an organ, but let us recollect also that this may be either primitive or consecutive, permanent or temporary. The changes which we are about to mention in the functions of digestion, are at least as often consecutive upon those diseases which have not their situation in those organs, as they are upon a change in the organs themselves. If they are sometimes purely local, they are much more frequently general and sympathetic. But how are these mysterious sympathies brought about? In spite of the efforts of physiologists, nature has not raised the veil which conceals these operations: all we know is, that our organisation, like the machines made by the hand of man, composed of a multitude of parts, is deranged or interrupted if any of these parts becomes displaced, and this in proportion to the importance of the part. Every thing in the human body is tied and linked together, and it is not more surprising to see the circulation disturbed when the stomach is inflamed, than to see the movements of a watch disordered when the regulator is broken.” (P. 258.)

“ But how are we to distinguish when a phenomenon is

merely sympathetic?" Although this be a matter of difficulty, still some general rules may be established. Thus, when it is established in a precise manner that one organ has suffered prior to any other, it will be probable that this is the organ principally affected, and that the functional disturbances which have subsequently arisen are merely sympathetic. Another mode of judging is from the facility with which certain functions are sympathetically affected; and again from the relative position of organs, when the disturbance of the one can be readily explained by the affection of the other. Finally, we are warned not to give implicit confidence to the above methods, but only to look upon them as probabilities, since there is no reason why several affections should not exist at the same time.

M. Rostan finishes this section with a hint to those who attribute all disorders of the digestive functions to a gastro-intestinal irritation; a hint which it is not necessary for us to extract, since it is only valuable to the practitioner on the other side of the Channel.

On hunger.—Increase of appetite is very seldom a morbid sign; nevertheless, it is met with in some diseases of the digestive organs, and in some nervous diseases: an example of which is related by our author in the case of a young physician, who experienced sensations of dragging and insupportable weight in the epigastric region, which always gave way, as if by enchantment, when a certain quantity of food was introduced into the stomach. Many other instances have occurred to our author, wherein an excessive degree of hunger was attendant upon organic disease of the digestive organs, but more especially of the stomach itself.

Hunger is commonly a sign of the presence of worms in the intestinal canal: if this is accompanied by twisting or pricking pains in various parts of the abdomen, and if he becomes thinner and paler, this suspicion is increased; but it is only their actual presence in the matters evacuated that can be termed a pathognomic sign of their existence.

In hysteria, an augmentation of appetite is not uncommon. A remarkable instance of this is mentioned:—A girl, named Lhermina, was accustomed to swallow an amazing quantity of food; this hunger was not continual; it returned by intervals. One day, being at the house of a lady, she was suddenly seized with her attack of hunger. In these extremities, she sometimes bit any person who came near her, and her own hands and arms sometimes bore the marks of her bites. On the day above mentioned, she devoured the soup prepared for twenty-four guests who were expected at the house. This girl was hysterical, and had no other symptom of organic disease; she was, however, sometimes attacked with hæmatemesis.

The appetite is also very often greatly increased in cases of mania and hypochondriasis; it is likewise occasionally much augmented before the invasion of acute disease.

Whenever there is a waste to repair, or a more than usual demand for nourishment, as in pregnant women, hunger is not to be considered as morbid. The diminution of appetite is, however, the usual attendant upon most diseases; and since we are sensible that abstinence is one of the most active means of exciting interstitial absorption,—that is to say, of favouring the resolution of all congestions,—ought we to be astonished at the precautions taken to proscribe food in these cases.

Of the deprivation of appetite usually met with in chlorosis, amenorrhœa, &c. a few words are said.

On thirst.—As a local sign, thirst is of as little value as want of appetite, but as a sympathetic phenomenon it is of more importance. Its existence is almost always a sign of the presence of irritation, and its intensity has generally a reference to the degree of that irritation. Thus it becomes useful in enabling us to judge of the violence of an inflammation, of the treatment necessary to be employed, and the prognostic to be given. Thirst is usually more intense at the commencement than towards the termination of inflammatory affections; and it sometimes, though rarely, happens that there is no thirst. If in chronic diseases it becomes increased, it is a sign that an irritation has taken place in some organ; but it is to be remembered that it is sometimes provoked by saline substances, by alcohol, by spiced food, and by abundant sweats, &c. Sometimes, where the thirst is considerable, there is still an aversion to liquids. This is the case in hydrophobia. But our author says truly, that this state is not always produced by a contagious virus, for it may arise spontaneously.

On the teeth and gums.—A few words will suffice on this head. Grinding the teeth is observed as a sign of many gastric irritations, although it is a healthy and natural action in some few individuals; occasionally it is the precursor of convulsions or delirium. We think our author need scarcely have mentioned the chattering of the teeth in the cold stage of intermittent and other fevers.

With regard to the gums, it is well known that in the scurvy they swell, become red, livid, and bleed; but, M. Rostan says, at an advanced period of life, when the teeth have fallen out, and the gums have become indurated by mastication, they never afterwards assume the spongy appearance, however intense the scurvy may be. In chlorosis, and some other chronic diseases, they are paler than natural, and even diminish in size.

Of the tongue.—This organ offers a great number of signs to the physician, but they are of very unequal value, and their

importance has been very much exaggerated. The *natural* condition of the tongue is known to every one, but the physician should carefully inquire as to its *habitual* state in the person to whom he is called. "I have known a lady, (observes our author,) whose tongue, in a state of health, is covered with a yellowish white deposit; but, when she is affected with any gastric irritation, it becomes clean." The writer of this article can confirm this remark by quoting his own case, which is very similar. Some individuals, who sleep with the mouth open, have a dry and brown tongue in the morning; others, especially old men, have the root of the tongue of a black colour. Finally, before any opinion is given as to the condition of this organ, it must be remembered that both food and medicine will alter its appearance.

Our author affirms that, although diseases of the digestive organs are painted in a very characteristic manner, the same may equally be said of diseases of the lungs; for in these the tongue changes its colour, and is covered with various coats, as well as in disorders of the alimentary canal.

The signs taken from the state of the tongue being almost always sympathetic, are of course more useful in prognosis than in diagnosis. The tongue is enlarged in several diseases, sometimes so as to threaten suffocation; and, in cases of extreme emaciation, it also becomes diminished in size. In acute diseases, the tongue sometimes appears smaller than natural; it is at the same time dry, rough, red, and pointed, and is occasionally protruded from the mouth with difficulty. This argues a high degree of irritation, either with concentration or diminution of vital power: this is commonly seen in affections of the brain. With regard to dryness of the tongue, the cause of this state is absolutely unknown, but it announces an irritation of the pulmonary or gastric organs. Cracks and fissures in the tongue imply the highest possible state of irritation. A very clear and red tongue announces a violent degree of inflammation. A red, dry, smooth, shining tongue, is sometimes met with at the termination of acute diseases, as well as in those which are more lengthened; and in this latter state they may be looked upon as the sign of a fresh development of inflammatory action.

Upon the whole, we may observe, in conclusion, that there is but little, either of novelty or ingenuity, in what M. Rostan observes of the condition of the tongue, since all its various appearances resolve themselves into signs of irritation. We think that this is the least happy of all the sections we have yet examined; though perhaps this is not so much the author's fault, as it is owing to the little certainty to be generally derived *solely* from the appearance of this organ.

A page or two next ensues, in which the *morbid conditions of the fauces*, and of *deglutition*, are mentioned, but they contain

nothing that is not familiarly known; we therefore proceed to consider the act of *vomiting*, as well as the appearance of the matters vomited. These remarks apply equally to nausea, &c. Our author defends M. MAGENDIE's theory of the mode in which vomiting is produced, and continues thus:—

“A still more important pathological conclusion may be drawn from the experiments of M. Magendie; which is, that he succeeded in producing vomiting by introducing into the veins emetic substances. It was not by acting on the stomach, but on the brain, that vomiting was produced, since in these experiments the stomach did not exist, and still that effect was produced. This conclusion is still further proved by the effect of certain odours, or tastes, or even the mere recollection of them, being sufficient to provoke vomiting. Tubercles in the brain give rise to obstinate vomiting; titillation of the uvula produces the same effect. It may therefore be called a cerebral act, caused, indeed, frequently by the state of the stomach.” (P. 283.)

Nevertheless, this act may depend upon certain substances taken into the stomach, upon inflammation, cancer, or a certain nervous affection peculiar to it; or, finally, upon the action of some organ which exercises an influence over it.

The consideration of the substances vomited have reference to prognosis, diagnosis, and therapeutic indications; but we do not find any remarks that tempt us to extend our notice of this section, and therefore we pass on to the last process, that of *defæcation*; and the first observation made by our author relates to the necessity of considering those extraneous circumstances which influence the quality of this excretion, especially as to its colour, which is likely to be affected either by certain kinds of food or medicines.

Dejections have been distinguished into critical and symptomatic. The first are followed by a solution or mitigation of many diseases; the latter produces no amendment. It has been the fashion of late to regard all the changes of appearance in the *fæces* as a sign of intestinal irritation. Our author conceives this to be an error: for example, there is generally costiveness at the commencement of all acute diseases, and this seems to bear some relation to the dryness of the skin under the same circumstance; and yet no one attributes this latter effect to an inflammation of the surface. Neither can we say truly, that the constipation of old men has any relation to inflammatory action. We can readily conceive the mischief to which the long residence of *fæcal* matter in the rectum may give rise. M. Rostan says, that he has seen the distension equal the size of a child's head. This state is rendered sometimes embarrassing to the physician, because the very inflammation excited by the presence of this quantity of *fæces* gives rise occasionally to a secretion from the intestinal surface, which, dissolving some of the *fæcal* matter around it, occasions a kind of diarrhœa;

so that the attendants will suppose that the complaint is exactly the contrary to what is really the case. Under such circumstances, M. Rostan has known the intestine to burst, and the contents to be evacuated into the cavity of the abdomen.

Constipation usually takes place when any other excretion is greatly augmented; it is observed in convalescence, and succeeds to the exhibition of purgatives, as a symptom of many other diseases, and sometimes in consequence of the local pressure of a tumor. From the above sketch, it appears that this condition is sometimes sympathetic, but most commonly the sign of a local condition of some of the organs contained in the abdomen; and that, in relation to prognosis and treatment, it is of the highest importance.

With respect to the opposite state, that of increased discharge of fæcal matter, our author denies also that this is the constant effect of intestinal irritation: in fact, he thinks that there are certain conditions of the mucous membrane of the intestines, quite opposed to inflammation, which give rise to very obstinate purgings. The mucous membrane in this state is pellucid, transparent, and as it were œdematous; the mucous matter appears, under these circumstances, to escape mechanically, by the mere feebleness of the mucous glands, or other parts engaged in the performance of this exhalation. Purging sometimes arises towards the conclusion of acute disease; it is a frequent occurrence in dropsies, during dentition, and in many other complaints. In phthisis, it is universally known as a precursor of death: here it arises from ulceration of the mucous membrane.

The gases contained in the intestines merits some attention: they were formerly attributed to the decomposition of the alimentary matters, or were supposed to be taken into the stomach with the food: but these, says M. Rostan, are not the true sources of intestinal gas. In hysteria, the abdomen will sometimes become tumid instantly; this cannot arise from food, because none has been taken in; it must therefore be admitted, that a species of perspiration takes place in the mucous membrane of the intestines, analogous to that which takes place on the skin, and upon the membrane lining the air-passages. In a general way, it may be said that the formation of gas in the intestines is a sign that the gastric organs do not enjoy a perfect degree of energy, though it cannot be considered as a sign of irritation. The uterus is sometimes affected with an accumulation of gas. The very act of passing the stools affords some signs to the physicians, but these are too obvious to require our notice.—On the nature of the fæces themselves, on their colour and consistence especially, M. Rostan makes several remarks; but they are not distinguished by novelty, and are perfectly understood and appreciated by the practitioners in this country.

MEDICAL AND PHYSICAL INTELLIGENCE.

COMPARATIVE ANATOMY.

1. *Dissection of an Ourang Outang.*—THE skin was attached very closely to the body at all parts, particularly on the face, hands, elbows, and soles of the feet. He had no cutaneous muscles except the platysma myoides: this was not connected on its inner surface, but formed a large pouch, extending from the chin to the sternum, continuing round to the sides of the neck. It was supposed by those who saw him to be a receptacle for food. This was not, however, its purpose; for it communicated with the larynx, and not with the pharynx, as will be described when speaking of those parts.

The abdomen presented a view so similar to the human, that it required some attention to note any peculiarities. The omentum was small, lying high up the intestines, coloured with bile, as were the bowels generally. The peritoneal folds were very strong, particularly the ligaments of the liver, the mesentery, &c.; the caput coli was also strongly confined to its place. The spermatic cord received its parts, and passed obliquely under the muscles, and came out at Poupart's ligament, as in man. The proportion of the small to the large intestines was about the same as in the human subject. The arch and sigmoid flexure of the colon exceedingly resembled the human. He had the appendix vermiformis very long, measuring four inches: this I found full of small stones and some pieces of egg-shell, together with liquid fæces. The large intestines were found loaded with indurated fæces, from the caput coli to the extremity of the rectum. The stomach, in situation and figure, was like a man's; its cardiac orifice was perhaps smaller, and the pylorus larger. Its dimensions were, when inflated, from one orifice to the other, round the fundus, ten and a half inches; across, it measured three inches: it was nine inches in circumference round the fundus. The spleen was attached by the vasa brevia, and, in colour, size, and situation, accorded to man's. The liver was very much like ours, of a deep red colour, and divided into two lobes; but the fissure was not quite so distinct: in connexion with the other viscera, it appeared exceedingly like the human. The gall-bladder was much longer, and smaller round, and was found full of dark inspissated bile, which could with difficulty be crowded along the duct. The pancreas laid upon the spine, as in man. These had all their orifices opening into the bowels, in the same way as the human. The kidneys did not present any difference, excepting that the renal capsules were larger. The bladder was small, containing, when full, about two gills. The urethra, prostate gland, vesiculæ, &c. were situated like the human. The prepuce, glans, &c. were like the human, but small. The organs of the chest resembled the human in size, figure, and situation. The lungs did not present quite so much difference on the two sides as in man; that of the left being nearly of the same size with the right, carrying the heart more towards the centre of the thorax. The lungs were not so distinctly divided into lobes;

they were very sound and healthy in appearance. The heart was conical, like man's, and in every respect resembled the human. The arch of the aorta, and the descending aorta, were small in proportion to the size of the heart. The right subclavian, right and left carotid arteries, all arose from the arteria innominata; the left subclavian rose separately, near the base of this. The pericardium was connected extensively to the diaphragm, which was very large and strong. The chest was divided by the mediastinum, and the thymus gland laid between its sides.

The mouth and fauces resembled the human, except in dimensions, being much longer from front to rear. The velum palati was without the uvula, but broader and more lax. The body which answered the purpose of the uvula was situated on the posterior surface of the velum; and, when this was forced backwards, exactly closed the posterior entrance of the nose. The glottis and epiglottis resembled the human. The os hyoides and cartilages of the larynx were much as in man. Between the os hyoides and the thyroid cartilage, there were on each side two openings, about a quarter of an inch in diameter, leading into the larynx, and coming out at the base of this cartilage. A valve played at the inferior opening, preventing the passage of an instrument downward; but it passed easily upwards into the pouch on the neck, which has been mentioned. This pouch the animal could inflate at pleasure; for what purpose I do not know. One use might be, when inflated, to assist in supporting him when swimming.

The brain weighed nine ounces and three-quarters. The nerves arose from this in the same manner as the human, and took their exit from the cranium in a similar way. The position of the brain differed by the anterior lobes being more raised, in consequence of the projecting plates of the orbits internally, and by the posterior lobes and cerebellum lying lower than the human, according to the form of the base of the cranium. This organ was not dissected.

The muscles and blood-vessels could not be so minutely examined, in consequence of the warmth of the season, as to enable me to give a correct account of them. The muscles were in general very distinct, having their fasciculi of fibres remarkably strong. The blood-vessels were small. (*Boston Journal of Philosophy*, vol. ii.)

2. *Comparison of Indian and European Skulls.*—Dr. PATTERSON, of Calcutta, from a comparison of numerous skulls of Indians with those of Europeans, has deduced that the head of the former is to that of the latter race, as two to three. Or otherwise, that the head of an European fifteen years of age, is of the same size as the head of an Indian thirty years of age. (*Revue Ency.*)

PHYSIOLOGY.

3. *Experiments on Poisoning.*—M. SEGALAS communicated to the Academy of Medicine the result of some experiments made by him, tending to prove that poisons rather produce their effects through the medium of the vessels, than of the nerves. The following is the result of his researches:—

1st. Having cut the spinal marrow of an animal, so as to render it paralytic, and having placed some alcoholic extract of nux vomica in the paralysed parts, he perceived that tetanus came on just as quickly and powerfully as if the nervous system had been entire.

2d. Having, on the contrary, left the spinal marrow untouched, but prevented the blood which returned from the part where the poison had been lodged from being carried to the heart, he observed that the poisoning did not take place.

3d. Tetanus appeared to come on equally quickly when he injected the poison into the bronchiæ, although the eighth pair of nerves were divided.

4th. The nux vomica placed in the thigh of an animal rendered paralytic by the division of the spinal marrow, produced tetanus not only in the trunk and upper extremities, but also in the paralysed parts.

5th. The same result takes place in whatever part the poison has been placed; only the contraction of the paralysed muscles is slower, and seems only to occur in proportion as the blood conveys the poisonous matter to the nerves which animate them.

6th. Having injected the poison into the crural artery of a paraplegic animal, its effects were manifested in the like manner: the convulsions commenced in the thighs, and only became general after the lapse of time judged to be necessary for the conveyance of the poison to the spinal marrow.

M. Segalas concludes from his experiments, that the voluntary muscles can contract themselves, in certain cases, independently of the action of the spino-cerebral system.

In these experiments, M. Segalas has often designedly made the division of the spinal marrow at different points, but most commonly on a level with the last vertebræ of the neck, or the first of the lumbar vertebræ; and this has produced no modification of the phenomena. (*Archives Generales.*)

4. *On the Utility of Blood-letting.*—M. GIBERT, of Paris, in a Memoir upon the above subject, observes, that local blood-letting is preferable to general, in inflammations of membranes. As a proof, he relates the case of a young man attacked with pleurisy, who had been bled copiously from the arm five times in the first three days of the disease, without effect; but who was promptly relieved by the application of a number of leeches to the pained part.

In the second part of his Memoir, M. Gibert says, that in many diseases local bleeding is not only useless, but hurtful; and he recites, in confirmation of this opinion, two cases where the disease was aggravated by its employment. One was of an eating ulcer of the nose; the other, a schirrous tumor of the breast.

M. Gibert relates some instances where bleeding has been found an heroic remedy; and, amongst others, that of a patient who appeared to be at the point of death, but who was restored by the loss of fourteen palettes of blood, which was again practised in the evening and the following day. (*Archives Generales.*)

PATHOLOGY.

5. *Abscess of the Œsophagus*.—A man, fifty-five years of age, powerfully athletic, experienced a violent fit of rage, during which he made great muscular exertion. Three days afterwards, he complained of inability to swallow even liquids, and attributed it to a violent pain on the left side of the larynx. No lesion, however, appeared on the outside of the throat.—Twenty leeches were applied.

Next day, deglutition was quite impossible; liquids returned through the nose. A slight redness was perceived at the bottom of the throat, but the swelling of the parts was not sufficient to hinder deglutition.—Bled largely from the feet.

On the third day, great thirst, extreme agitation, and pain in the neck excessive.—Again bled from the feet to sixteen ounces, and a warm bath used. This brought on a convulsion, which lasted half an hour.

Fourth day, symptoms still increasing.—Twenty leeches to the neck, and ice to the head.

Fifth.—Another convulsion, still more severe than the last, with every symptom of cerebral congestion. Head burning hot; face red and swollen; conjunctiva injected; respiration feeble; pulse depressed; suspension of all his faculties; deglutition still impracticable.—These symptoms yielded to the application of forty leeches to the neck, sinapisms to the feet, a blister to the nape of the neck, and ice on the head.

Sixth.—A gum elastic sound was tried to be introduced into the stomach, ineffectually: it only reached the inferior part of the pharynx, and there caused such violent pain, that it was obliged to be withdrawn. Gargles were used to quench thirst, and lavements of broth.

This state was extended to the seventeenth day: then the patient suddenly spit up by the mouth, and without effort, four spoonsful of thick pus, bloody, and of an extreme fetor.

Eighteenth day, he had hiccup, followed by a peculiar sensation in the stomach and Œsophagus, and by a very acute colicky movement through the intestinal canal; and he soon passed by stool some matter, mixed with bile, and exhaling an insupportable smell. There was no return of this last evacuation, but that from the mouth continued fifteen days. Deglutition, at first difficult, was re-established by degrees, and at the end of a month the cure was complete.

This appears to have been a case of abscess in the side of the Œsophagus, probably occasioned by the rupture of some of the muscular fibres of that canal during the violent muscular efforts made when in a furious passion. The cerebral symptoms were occasioned by the pressure of the inflamed pharynx on the internal jugular veins. (*Revue Medicale.*)

6. *Melanoid Tumor of the Face*.—In the Clinical Reports of the Hospital de la Pitié, M. RICORD relates two cases; one of "cancer melanique" of the face, which was operated on, and followed by enlargements of the submaxillary glands, with lancinating pains, &c.; and

which was cured by repeated applications of leeches, and strict attention to diet.

In the second case, a cancer of the right breast had been removed, and fifteen months after was followed by schirrous enlargement of the glands and cellular tissue in the armpit. The means used were general and local bleedings, belladonna, and, to relieve an increased action of the heart, twelve grains of digitalis in a lavement, which had the desired effect. In this case, four leeches were applied to the upper and inner part of the thigh, generally with the effect of bringing on menstruation; and at one time, by being repeated during eight days, they took place of the menses altogether. (*Ib.*)

7. Observations on Salivary Calculi.—Calculous concretions are occasionally produced from the saliva, as well as from the other animal fluids. FOURCROY was of opinion that salivary calculi consist of phosphate of lime and an animal substance, and that they are formed when the saliva is supersaturated with the earthy salt. It is difficult to comprehend in what manner, and under what circumstances, such a supersaturation of so limpid a fluid should arise. Salivary calculi may exist in any part of the cavities destined for the separation and passage of the saliva. The histories of the cases on record are deficient in a symptomalogical and diagnostic point of view, and, in respect to the treatment of this interesting form of disease, but little has been said.

Elizabeth Hinzen, a robust and healthy peasant girl, sought the advice of Professor WALTHER on account of a fistulous ulcer on the upper part of the left side of the neck, at the bottom of which could be detected, with a probe, a hard and somewhat moveable substance. She had not previously suffered from any severe disease; she had menstruated regularly, and could assign no probable cause for her present complaint. It had arisen in the following manner:—Nearly three years before, under the tongue towards the left side, a painful swelling had made its appearance, which was very distressing during the act of mastication. In the course of three days it had become of the size of a hazel-nut; and, by frequent fomentations with warm milk, it broke into the cavity of the mouth, and discharged a tolerable quantity of pus. This swelling did not discharge its contents through the natural opening of the Whartonian duct, but close to it. The discoloration of the ulcerated spot could yet be perceived. Three months afterwards, the swelling again occurred, with precisely the same appearances, and ruptured on an adjoining part. The suppuration lasted a long time, but at length the ulcerated opening closed. The mark left was very perceptible at a small distance from that of the first ulceration. Between the two spots was the opening of the salivary canal, in which could be easily introduced the point of a fine probe, to about the depth of two lines. Some time after the healing of the second internal ulcer, arose, on the left and upper side of the neck, near the angle of the under jaw, a very painful swelling, of considerable size, which, by the employment of warm emollient poultices, broke, and discharged a great quantity of matter. This ulcerated swelling had since remained fistulous, and into its cavity the two above-mentioned ulcerated openings led. Without

any success, the patient had employed various ointments, plasters, and injections, in order to heal the fistula. When a probe was introduced into the fistulous opening, at about the depth of an inch, it struck against a hard resisting body, which appeared to have a rough surface, and some degree of motion; although but an imperfect opinion could be formed of its true nature. Without doubt, however, its presence at the bottom of the fistulous passage was either the cause of the disease, or at least an impediment to the relief of the patient. It was also highly probable that the external fistulous opening, and the two former ones in the mouth, were dependent upon a common cause.

As the patient was very pressing for the healing of the external opening, which clearly depended upon the removal of the foreign body, Walther proceeded, in the first place, to enlarge the fistulous passage by means of a bistoury. The external maxillary artery was necessarily divided. For a moment the hemorrhage was considerable: it was, however, easily repressed by the pressure of the finger. It was not possible to apply ligatures to the divided arteries, on account of their depth. In the extirpation of the submaxillary gland, this difficulty is not experienced. In this case, Walther has frequently tied these arteries. In consequence of the enlargement of the gland, the artery is raised, and lies in a more superficial situation. After the widening of the canal, the foreign body was with difficulty grasped and removed by a pair of forceps. It proved to be a salivary calculus, of a long form, about half an inch in size, and with a rough surface.

An uniting bandage was applied, and the patient put to bed. It was necessary, however, to remove the bandage at the expiration of half an hour, on account of the renewal of the hemorrhage. A piece of sponge was now introduced into the wound, and remained till the beginning of the fourth day, when it was removed. No more bleeding took place, and in a short time the wound healed, after a moderate discharge of laudable pus. The patient has since remained entirely well. (Gräfe und Walther, *Journal für Chirurgie*.)

8. *Spontaneous Discharge of Salivary Calculi from the Whartonian Duct.*—Graf L. St. G. a man sixty-four years of age, who had suffered frequently from catarrhal, rheumatic, and hepatic affections, and who, two years before, had been treated by Professor WALTHER for a gangrenous and aphthous ulceration of the palate, had for sixteen years been affected with a hard swelling of the left submaxillary gland. This swelling arose without any obvious cause. It was considered as a scrofulous enlargement, although the affected gland was not a lymphatic, and the conglobate glands were free from enlargement. Throughout his early years, also, the patient had been entirely exempt from any strumous disease.

For the purpose of dispersing the enlargement, many remedies were in vain employed. The enlarged gland felt as hard as a true schirrus, and would certainly have been considered as such, and its extirpation undertaken, if a particular circumstance had not occurred, which is never observed in true schirrous swellings,—namely, a great change in the size of the enlargement, which sometimes, without any

obvious cause, very much diminished, and indeed almost totally disappeared, and then always regained its former volume. It became gradually of the size of a hen's egg. Upon pressure, it was very painful, and hindered the free motion of the lower jaw, and rendered the act of swallowing difficult.—Leeches freely applied, and various cataplasms, and other means, afforded but little benefit.

One morning the swelling was much diminished, and the patient consequently greatly relieved. The pain and difficulty in swallowing were much abated. Upon looking into the mouth, a foreign body was discovered under the tongue, which had not been detected by the patient. It was removed, and ascertained to be a salivary calculus, which had spontaneously passed through the Whartonian duct, after having been formed in the submaxillary gland. Upon drawing the recollection of the patient to the previous state of the parts, he remembered he had observed a small pimple under the tongue, which had been painful, and broke within two or three days, discharging a clear fluid. This appearance might probably have been caused by an obstruction of the opening of the Whartonian duct, in consequence of the presence of a small calculus, the removal of which would have been followed by an increased discharge of the salivary fluid. The patient had never suffered from Ranula. The opening of the Whartonian duct was not found to be enlarged or torn, even immediately after the escape of this calculus, which was rather large. The swelling now diminished in size; but, as it still continued hard, it was apprehended that other calculous bodies might be contained in the ramifications of the duct, in the substance of the gland.

Some months after, another calculus escaped. The passage of it through the canal, and its arrival in the mouth, were clearly felt by the patient. The submaxillary gland still remained hard and enlarged.

The great object was now to effect a radical cure, and to prevent the formation of more calculi; and, considering the length of time the patient had been afflicted, the complete success that resulted from the internal use of the carbonated potass was hardly to be expected. This medicine has been employed by Walther for many years, with great advantage, to prevent the formation of calculi in the kidneys. It had also been previously employed, with success, to hinder the formation of lachrymal calculi in the space between the eyeball and eyelids. The origin, not only of urinary calculi, but of all animal concretions, is dependent upon a peculiar acid matter, which is formed in the fluids of the human body in certain proportions, and which, uniting with the first deposition, forms the origin of the concretion. The Graf L. took, for more than half a year, daily about twelve grains of carbonate of potass, dissolved in cinnamon water; and subsequently no calculus passed. The enlargement of the gland gradually diminished, and at length totally disappeared.

Walther states, that he considered the continuance of the medicine necessary for some years, in order to prevent the formation of calculi in the Whartonian duct, as the effect of the alkalies in restraining the disposition to calculous depositions is not permanent. (*Ibid.*)

*** Many observations follow the detail of the above cases, which

cannot be considered without interest, but which appear to show that the author is not acquainted with the labours of PROUT, MARCET, &c. &c. who have so fully explained the particular cases in which the alkalies are likely to be of benefit, and the manner in which they should be employed.

PRACTICAL MEDICINE.

9. *Bicarbonate of Soda as a Lithontriptic*.—M. ROBIQUET read a notice on the employment of this salt in urinary calculi. Having learnt of M. DARET, that the use of the waters of Vichy renders that urine alkaline which was previously acid, he conjectured that this effect was owing to the bicarbonate of soda which these waters contain, and therefore conceived the idea of administering it internally. Last July, he tried it in the case of a man, seventy-four years of age, who had suffered from the February preceding, and in whom a stone had been detached by sounding, small and slender, and capable of being extracted by M. CIVIALE's process. He was ordered to take, during the day, two litres of a solution of the above salt, in the proportion of five grains to the litre, together with hip-baths, lavements, &c. Fifteen days of this treatment produced great relief. At the end of a month, the patient appeared quite cured; nevertheless, the same treatment was continued, and, last November, the man passed by the urethra a small calculus of uric acid, which appeared to be the nucleus of one that had been much larger, the external surface of which had been worn away. The patient has not suffered since, but he has not been sounded. (*Archives Generales.*)

10. *Tincture of Dhatura*.—Dr. ADAM submitted to the Medical Society of Calcutta a tincture of dhatura, which he had lately made; conceiving that it would be found, in that country especially, a useful form of exhibiting that remedy. It is a saturated tincture, prepared from the capsules, seeds, and leaves, mixed in equal parts, and with the proportion of proof spirit used by the London College in the preparation of tincture of digitalis. The variety of the plant used is the *Dhatura fastuosa (kala dhatura)*, cultivated under his own inspection at Allipore. This is reckoned more powerful than any of the other species, and it was therefore selected on that account. The tincture is of a dark green colour, and resembles in that respect, as well as in flavour, the saturated tincture of digitalis. He has only yet employed it in two cases,—one of asthma, in a native; the other of organic disease, most probably aneurism of the aorta, in a European. It was given in the dose of thirty and forty minims, repeated after two hours, to four doses, when relief was obtained. (*Transactions of the Med. and Phys. Society of Calcutta.*)

STATISTICAL MEDICINE.

11. *Plague and Yellow Fever*.—M. RENAULDIN, in the name of a commission composed of twelve members, submitted to the Academy the plan of an answer to be made to the Minister, on the subject of the

experiments that MM. COSTA LASSIS and LASSERE have proposed to make in the lazaretto of Marseilles, to determine the non-contagion of plague and yellow fever. After enumerating the dangers that might result to France from the introduction of the materials necessary to these experiments, he concludes by proposing to government to accept the offers of the experimenters, but only in the event of yellow fever or plague being accidentally introduced into the lazaretto; and then to be careful that the experiments are in a separate quarter of the lazaretto. He compares the dangers that the experimenters wish to brave to those which are encountered in the pursuit of geographical discoveries, and which government not only permits, but encourages. (*Revue Med.*)

12. *Diminution of Goitre in the Pyrenees.*—When presenting a Memoir on Goitres, by M. ROULIN of Bogota, to the Academy, M. MAGENDIE, who has lately traversed the Pyrenees, stated that this disease is much less frequent than heretofore. This amelioration, according to him, is caused by the increased riches of the inhabitants,—the extended culture of grain,—and by the better construction of the houses. M. MOEGEY remarked on this subject, that M. FABRONI thought he had observed that the granitic valleys only of the Pyrenees were exempt from the goitre. (*Ann. de Chimie.*)

SURGERY.

13. *Operation for Phymosis.*—M. J. CLOQUET related to the Academy of Medicine a mode, which he regards as new, of performing the above operation, and which has the advantage of leaving no deformity. This method consists in introducing a grooved director within the prepuce on a level with the frænum and parallel to it, and cutting the prepuce at its lower part. If the frænum is very short, it should be divided with the scissars. The longitudinal wound thus made becomes transverse as soon as the prepuce is drawn back behind the glans; so that the prepuce acquires in breadth what it had lost in length. Several patients, on whom M. Cloquet had operated in this manner, were so perfectly cured that it was difficult to see the cicatrices, the prepuce appearing to have its natural conformation. (*Archives Generales.*)

MIDWIFERY.

14. *Impregnation in the Fallopian Tube.*—By order of the civil authorities, Professor G. B. was called upon to examine the body of a healthy robust unmarried female, eighteen years of age, who had died suddenly. No external lesion or alteration was visible; the members were all flexible; a large ecchymosis occupied the umbilical region, the left hypochondrium, and corresponding thigh. An incision was made in the parietes of the abdomen, and the first appearance that presented itself was a considerable quantity of coagulated blood, which filled the cavity, especially the left hypochondrium, and the corresponding part of the pelvis. Many clots of blood were also found in exa-

mining the condition of the viscera, and among these a ball, of about twice the size of a goose's egg, was extracted, formed of transparent membranes, through which was distinctly perceived a fœtus of the male sex, floating in its proper fluid, apparently of about four months' growth. The internal organs of generation being next examined carefully, and cleansed from the coagulated blood, a rupture of the left fallopian tube was discovered, where the above-mentioned fœtus had been lodged. This tube was rent in its central point, to which the placenta adhered. To the division of the parietes of the distended tube was also added that of the little umbilical cord, from whence arose the hemorrhage, the falling of the ovum into the cavity of the abdomen, and the death of the mother.

The uterus being separated, and accurately examined, it appeared rather more voluminous than in the virgin state, as well as redder, softer in substance, and having its internal surface covered with a flocculent membranous stratum, spongy, and of a yellowish white colour. The right fallopian tube was rather more distended and more vascular than natural. Both the ovaries were enlarged, and the right containing a corpus luteum, the left spermatic artery and vein were of a much larger calibre than ordinary. The left fallopian tube had lost its natural shape, and appeared like a thin membranous sac, interwoven with many blood-vessels much increased in size: its free extremity embraced the left ovarium. Below the distended part, towards the uterus, the tube was entirely obliterated.

On examining the ovum and fœtus, it was found that the placenta was not of a size corresponding to that of a fœtus of four months. The fœtus and membranes were natural, as was also the position and attachment of the umbilical cord. (*Annali Universali.*)

15. *Extract of a Letter from T. E. BAKER, Esq. of Buxar, describing a singularly small Child.*—The following account of a singularly small child, you will probably think sufficiently interesting to communicate to the Society. Some of the members will probably be able to inform me whether there is any well authenticated history of an equally small child, having ever lived more than a few days.

The child is the daughter of a Mrs. Green, the wife of the riding-master of the 5th Native Cavalry, and is now, with the mother, living at this station with Mr. Edwards, an overseer to the Honourable Company's stud depôt. It has been seen by Mr. Surgeon Gibb, the superintendent of the stud; by Mr. Thompson, the civil surgeon at Arrah; by Captain J. Mackenzie, and other residents at the station.

The mother was coming by water from Agra, and was confined near Bandah, when she thought herself about six months and a half gone with child; and attributed her premature confinement to having over-exerted herself in removing some boxes, &c.

On this day (May 24th), the child is one month and twenty days old: it weighs exactly one pound and thirteen ounces, and is fourteen inches in length. The following are the dimensions of the principal parts of the body:

Circumference of the head (longest diameter)	. 10 inches.
Ditto ditto (shortest diameter)	. 9 inches 1-10th.
Ditto of the chest	. 9 inches.
Ditto of the body	. 8 inches.
Ditto of the thigh, midway between the knee and the hip-joint	. 2 inches 6-10ths.
Ditto of the fore-arm, midway between the wrists and elbow	. 1 inch 7-10ths.

I much regret the weight and dimensions of this child were not taken when it was first born; for the mother informs me it has grown considerably since that time. At first it would not take to the breast, but now it sucks very well.

The bones of the head are rather loose, and the anterior and posterior fontanels are large in proportion to the size of the head.

The mother of the child is a healthy woman, and has four other very fine children.

It is, of course, very uncertain whether this child will live; but, should it be alive when three months old, I shall again take the dimensions of it. (*Trans. of the Med. and Phys. Society of Calcutta.*)

CHEMISTRY.

16. *Account of Prof. BERZELIUS's Method of detecting Arsenic in the Bodies of Persons poisoned.*—Prof. Berzelius has lately given some instructions for the discovery of arsenic in persons that have been poisoned with it. He considers *the reduction of arsenic to the metallic state as the only incontestible proof of the presence of this poison.* Arsenic may occur in two ways, —viz. when it is found in substance (in the state of arsenious acid) in the dead body, and when it is not found in this state; though the intestines of the dead body may contain it in the state of a solution.

In the first of these cases, it is easy to determine the presence of arsenic. In order to do this, take a piece, about three inches long, of an ordinary barometer tube, and having drawn out one end of it into a much narrower tube, close the end. Let some of the arsenic found in the body be now put in at the open or larger end, so that it may fall down to the bottom. Any quantity of this arsenic, of sufficient volume to be taken from the body, will suffice for this purpose. The arsenic being at the bottom of the small part of the tube, a little charcoal is let fall upon it, after it has been freed from all moisture by bringing it to a red heat with the blowpipe. The charcoal is then heated in the tube at the flame of a spirit-lamp, the point where the arsenic lies being held out of the flame. When the charcoal is very red, the point containing the arsenic is drawn into the flame. The arsenic is then instantly volatilised, and, passing into vapour by the red charcoal, it is reduced, and reappears on the other side of the flame in a metallic state. The flame is then brought slowly towards the metallic sublimate, which is thus concentrated into a smaller space in the small tube; and then presents a small metallic ring, shining like polished steel.* We have now only

* Had the experiment been made in the wide part of the tube, the result would scarcely have been visible with a small quantity of arsenic.

to verify, by its smell, that the metallic sublimate is arsenic. For this purpose, cut the small tube with a file a little above the sublimate, and, having heated the place where it lies, put the nose above it at a small distance, and the particular odour of the metal will be immediately perceived.

In the case where the solid arsenic cannot be found, we must collect as much as possible of the contents of the stomach and the intestines, or even cut the stomach in pieces, and mix it with its contents. The whole is then to be digested with a solution of hydrate of potash. Hydrochloric acid is then added in excess. The whole is filtered, and, if the liquor is too much diluted, it is concentrated by evaporation. A current of sulphuretted hydrogen is then passed through it, which precipitates the arsenic in the form of the yellow sulphuret. If the quantity of arsenic is very small, the liquid will become yellow without giving a precipitate. It must then be evaporated; and, in proportion as the hydrochloric acid becomes more concentrated, the sulphuret of arsenic will begin to be deposited. It is then filtered. If the sulphuret remaining on the filter is in too small a quantity to be taken from the paper, add some drops of caustic ammonia, which will dissolve it. Then put the liquid which passes the filter into a watch-glass, and evaporate it. The ammonia will be volatilised, and will leave as a residue the sulphuret of arsenic. If it shall still be difficult to collect the sulphuret, we must put into the watch-glass a little pulverised nitrate of potash, and, with the finger, mix the sulphuret with the nitrate of potash, which detaches it from the glass. At the bottom of a small phial, or a piece of glass tube, shut at one end, melt a little nitrate of potash at the flame of a spirit-lamp, and introduce into it, when melted, a little of the mixture which contains the sulphuret of arsenic. It is oxidised with effervescence, but without fire or detonation, and without loss of arsenic. The melted salt is then to be dissolved in water, and lime added in excess, and the liquid boiled. The arseniate of lime will then be deposited, and may be collected. When dried, it is mixed with charcoal, and then brought to a red heat by the blowpipe; and a small quantity of this mixture is allowed to fall to the small end of the above-mentioned tube. It is now gradually heated to expel all humidity which tends to throw it into the wide part of the tube; and, when it is very dry, heat, at the flame of the blowpipe, the part of the tube which contains the mixture. The arsenic will be disengaged, and be sublimed at a distance from the heated part. An addition of vitrified boracic acid greatly promotes the decomposition which then takes place at a less elevated temperature; but the acid frequently contains water, and produces a bubbling of the melted matter, which raises it in the tube, and causes the vapours to issue by perforating the softened part of the glass.

M. Berzelius maintains, that the *sixth part of a grain of sulphuret of arsenic is sufficient to make three different trials*; but he adds, that, when we have discovered only very small traces of arsenic, we must take care not to introduce any by means of re-agents, among which, both the sulphuric and the hydrochloric acid may contain it. The first almost always contains some arsenic when it is manufactured from vol-

canic sulphur; and the second, in consequence of sulphuric acid being used in the preparation of hydrochloric acid, yields the arsenic which it contains in separating it from soda. We must, therefore, be certain of the purity of these reagents.

When death has been caused by the arsenic, and not by the arsenious acid, the process must be modified, because the sulphuretted hydrogen gas decomposes the arsenic acid too slowly. In this case, we must add hydrosulphuret of ammonia, which reduces the arsenic acid to the state of sulphuret, which is afterwards precipitated by the hydrochloric acid. (*Edinburgh Phil. Journal.*)

MEDICAL JURISPRUDENCE.

17. *Marks of Vitality in New-born Infants.*—It was in pursuing these researches that Dr. BERNT hit upon an observation, which, if correct, will establish the distinction of an inflated from an uninflated lung, upon the most solid foundation. He seems himself to consider it as an almost infallible test.

The circulation of a child undergoes an extensive revolution the moment it breathes, and the placental subsidiary action becomes suspended. The blood arriving at the liver by the umbilical vein, is withdrawn from that organ, which ought to be rendered so much lighter by its abstraction; and the lungs, by the blood of the ductus arteriosus flowing through them, must have become proportionally heavier. The mere examination of these circumstances in a new-born child, will go far to determine whether it has breathed; but the test which he chiefly rests upon, is the appearance and situation of the opening of the foramen ovale. *This hole, in a child which has never breathed, is exactly in the bottom of the fossa ovalis; but, as soon as the child has breathed, the aperture becomes turned towards the right; in several weeks, it has ascended very high; and, in adult age, is found to have arrived at the summit of the oval.* In other words, from the moment respiration commences, the aperture of the foramen ovale begins to travel from the lower extremity of the oval hole towards the upper, proceeding from *left to right*: and the degree of advance it has made, becomes an index of the existence and duration of the respiratory process.

This semi-revolution of the aperture around the centre of the axis of the foramen ovale, after birth, so important in an anatomical and physiological, as well as docimastic, point of view, is in some degree hinted at by our countryman, Dr. HUMPHRY RIDLEY, (*Observ. de Cord. Embryon.* Lugd. 1750, at p. 180—4;) but afterwards more fully developed by DIOBOLDT, in 1771.

The reason of the phenomenon, Dr. Bernt conjectures to be the contraction of the muscular fibres of the isthmus Vieussenii; but we are ourselves inclined to attribute it rather to the diminished resistance offered, after birth, to the stream of blood projected from the right ventricle, and the consequently increased resistance to that which is simultaneously sent from the left. It is known that accumulation in the right ventricle generates also an accumulation of blood in the right au-

ricle, and even in the venæ cavæ which open into it. As long as this state continues, the lower cava, aided as it is by the placental contribution, will be predominant; and, ascending from below, will keep the valve of the oval hole from adhering to the edges, from above downwards; or, in other words, will preserve the aperture at the bottom of the fossa. But, as soon as the aortal resistance is withdrawn from the right side of the heart, by respiration, and the placental supply from the lower cava, by obliteration of the cord, the equilibrium becomes almost perfect between the ascending and descending cava, in the infant; and the centre of their joint impulse must be brought up near, or beyond, the central diameter of the oval hole. The valve, however, can only be displaced gradually in this direction; and, accordingly, it is not before the adult age that the aperture arrives at the top of the valve. This ascent is much assisted by the preponderance of the left ventricle, which, reacting against the whole resistance of the circulation, lessens the angle of position of the axis of the right heart to the axes of the hollow veins, and thereby the line of pressure upon the oval hole, in the direction upwards. At all events, whatever is the theory, the fact is most valuable; and we consider both the docimastic methods above adduced, as affording simple, easily practicable, and therefore most valuable, additions to the jurisprudential part of our profession; and to that part of it which is never exercised without great hazard of the reputation, and certain laceration of the feelings, even to the most conscientious practitioners. (*Edinburgh Journal of Medical Science*, No. 2.)

NATURAL HISTORY.

18. *Fecula of Plants*.—M. RASPAIL read a Memoir on the Development of the Fecula of Plants. His conclusions are, that it exists always free in the cells of plants; that, observed by the microscope, it appears in the form of round grains, hard and translucent, of different diameters; spherical in the orchis and in the cerealia; irregular in the potato, and much larger than in other plants. The diameter of the grains of fecula increase with the age of the plant. The blue colour which it assumes with iodine operates no change in its form: it may be deprived of its colour by an alkali, and coloured again by the iodine, a great many times, without undergoing any change. These grains are composed of an exterior integument, of an internal substance, analogous to gum, and solid at the common temperature of the air: when heated, they increase in size, and the interior substance makes its way through the integument, either by tearing it or by passing through its tissue. When boiled in a quantity of water, the gummy matter is dissolved, whilst the integuments are precipitated on cooling. They are white, and unchangeable even by the concentrated acids. (*Archives Gen.*)

MISCELLANEOUS.

19. *Breeding of Leeches*.—M. CHATELAIN, chief apothecary to the navy at Toulouse, uses this method:—He places the leeches into

earthen vessels, at the bottom of which a stratum of clay, made into a paste, is put, which should be separated from the sides of the vessels a little all round, that the leeches, in penetrating to the bottom of the vessel, may be able to rise again. M. C. also recommends them to be kept in places not too cold: they require the atmospheric heat of spring to deposit their eggs.

M. GUIBORT says, that, as the clay soils the leeches, it would be better to put pure sand at the bottom of the vessels; placing a tube so that, being plunged to the bottom, fresh water might by degrees be added: in this way the old water would escape by the top of the vessel, and the leeches might always have fresh water. M. G. thinks that the custom of changing at once the whole mass of water in which leeches have been, kills a great many of them, from the sudden change of temperature.

On this subject, M. PELLETTIER cites an interesting fact:—Some carp, which were living in the corrupted water of a tank, were seized with an eruptive disease, (reddish pustules,) which caused them to die. He threw some animal carbon into the water, which became good, and the fish recovered their health. Some authors have looked upon this disease of the fish to be a species of small-pox. (*Revue Medicale.*)

MONTHLY CATALOGUE OF MEDICAL BOOKS.

* * It having been hinted to us that gentlemen, sending copies of their Works, prefer having their titles given at length, it is our intention, in future, to comply with this suggestion: but it is to be observed, that no books can be entered on this List except those sent to us for the purpose;—finding, in the lists hitherto transmitted, that the names of works have frequently been given as published, which have not appeared for weeks, or even months, after.

An Essay on Headachs, and on their Cure. By WALTER VAUGHAN, M.D. of the Royal College of Physicians in London.—London, 1825.

An Exposition of the State of the Medical Profession in the British Dominions; and of the injurious Effects of the Monopoly, by Usurpation, of the Royal College of Physicians in London.—London, 1826.

The Surgeon-Dentist's Anatomical and Physiological Manual. By G. WAITE, Member of the Royal College of Surgeons.—London, 1826.

Farther Remarks on Hernia, in Explanation of the Nature of Strangulation, and of obliterated Intestine, and in Defence of Views and Suggestions towards Improvement in the Treatment. By E. GEOGHEGAN, M.R.C.S. Honorary Member of the Royal Medical Society, Edinburgh; and Surgeon to the Dublin General Dispensary. In a Letter to JOHN ABERNETHY, Esq.—Dublin.

A Case of Melanosis, with general Observations on the Pathology of this interesting Disease. By THOMAS FAWCINGTON, Member of the Royal College of Surgeons, London; and one of the Surgeons to the Manchester Lying-in Hospital. Illustrated by coloured Lithographic Plates.—London, 1826.

Proceedings of the Seventh Anniversary Meeting of the Hunterian Society, held on the 8th of February, 1826; with the Report, and List of Officers and Members.—London, 1826.

METEOROLOGICAL JOURNAL,

From April 20, to May 19, 1826, inclusive.

By Messrs. WILLIAM HARRIS and Co. Mathematical Instrument Makers,
50, Holborn, London.

	MOON.	Rain gauge	THERM.			BAROM.		DE LUC'S HYG.		WIND.		ATMOSPHERIC VARIATIONS.		
			9 A.M.	MAX.	MIN.	9 A.M.	10 P.M.	9 A.M.	10 P.M.	9 A.M.	10 P.M.	9 A.M.	2 P.M.	10 P.M.
Apr.														
20			55	61	42	29.74	29.54	66	68	ENE	SW	Fine	Fine	Fine
21			60	63	52	29.54	29.54	61	63	SSW	ENE			Fair
22	○		61	65	41	29.50	29.62	65	68	SSE	NNW			Rain
23			50	56	38	29.65	29.72	71	61	WNW	WNW	Cloud.	Fair	Fine
24			45	56	39	29.76	29.82	65	61	NNW	NNW	Fine	Fine	Fair
25			44	55	42	29.88	29.73	65	63	WNW	W		Rain	Rain
26		.25	50	53	40	29.56	29.53	59	59	NNW	ENE	Fair	Fair	Overc.
27			43	52	34	29.35	29.62	75	75	SSE	NNW	Rain	Rain	Fair
28			40	49	32	29.75	29.84	66	63	NW	WNW	Fair	Fine	Fine
29	☾		43	52	33	29.88	29.98	65	64	N	N	Cloud.	Fair	Fair
30			45	58	39	30.01	30.12	67	65	N	NNE	Fair	Fine	Fine
May														
1			45	54	36	30.15	30.08	63	69	N	N			
2		.10	46	60	43	30.00	29.92	71	64	N	SE			
3			48	49	40	29.91	29.97	76	66	NE	NNE		Rain	
4			47	48	41	29.94	29.94	65	68	NNE	N		Fair	Fair
5			47	52	40	29.90	29.98	72	69	NNE	N to E	Cloud.		
6		.5	43	48	39	29.90	29.93	68	76	NNW	NNE		Rain	
7	●		49	52	12	29.93	29.93	70	80	NEva.	NNE	Fine	Fine	Fine
8			52	60	39	29.93	29.94	70	61	ENE	NE			
9			51	60	45	29.94	29.93	61	60	NE	SE			
10			57	63	49	29.95	29.93	60	60	NE	ESE			Fair
11			51	60	43	29.96	30.05	65	64	E	E	S. Rain		
12			51	54	43	30.10	30.16	65	63	NNE	NE	Fine		
13			47	56	39	30.15	30.04	63	68	ENE	E			
14	☾		53	58	41	29.98	29.98	67	65	E	E			Fine
15			54	57	42	29.99	30.00	63	68	NNE	SE			
16			49	64	51	29.99	29.95	78	64	ESE	WSW			
17			64	68	56	29.98	30.00	60	66	NW	WNW			Fair
18			62	70	51	30.00	29.89	72	65	W	SW		Rain	
19		.17	61	68	51	29.78	29.62	66	60	SW	ESE		Fine	Rain

The quantity of rain fallen in the month of April,
was 76.100ths of an inch.

NOTICE TO CORRESPONDENTS.

We request the attention of our Correspondents to the Prospectus at the commencement of this Number.—Communications, through the usual channel, are respectfully solicited.

APPENDIX.

WE have received the following from Dr. VENABLES, relative to the Review of his Work on "Diabetes." We publish it, that he may have no reason to complain of injustice; while we give it as an Appendix, that it may not interfere with the usual arrangement of the Journal. (EDITORS.)

IN the Review of my work on Diabetes, which has appeared in the London Medical and Physical Journal for the present month, an opinion of its merits seems to have been formed upon very erroneous assumptions. The Reviewer first finds fault with me because I did not choose to communicate to the profession my views with regard to diabetes through some other medium than that of a distinct and specific publication. Upon this question, however, it is possible that the ideas of the Reviewer might prove as injudicious as the course which I have adopted. It is asserted, that two simple facts are issued forth in the cumbersome and bulky form of a large octavo volume. The body of the work consists of ninety-four pages; and in these ninety-four pages I have enumerated causes, and circumstances in the general history of the disease, which I cannot find enumerated, or even adverted to, in systematic works, nor in the most recent publications upon the subject; but yet systematic works generally profess to give a summary of every thing known upon each specific subject. It is unnecessary to enumerate these individually, as, on a reference to the proper heads, they will be immediately recognised.

I have stated that an increased flow of urine is frequently a severe disease in children, and that this circumstance has not attracted that general attention which its importance demands. How does the Reviewer attempt to prove the falsehood of the latter proposition? By asserting that Dr. Underwood has devoted a chapter to Polydipsia, and another to Diabetes infantilis; that he quotes Zuingerus, as testifying that thirst, accompanied with a great flow of urine, is a common affection among children; and that Moreton, in his Phthisiologia, mentions consumption from diabetes as a common disorder in infancy. These facts, in my mind, only tend to confirm the truth of my assertions, and to establish the accuracy of my observations as to the frequent prevalence of such an affection; for the authors above referred to clearly prove the existence of such a disease, and distinctly state (according to the Reviewer,) that "it is a common affection among children." So far for the prevalence of the disease: now for the professional attention bestowed upon it.

The Reviewer has not referred specifically to any cases recorded in the public journals, or other works, to show that the disease, as I have described it, has met with that universal attention which the Reviewer would lead us to suppose, or that it has even met with that ordinary attention bestowed upon diseases attended with more obvious symptoms. The Reviewer states that he has enjoyed extensive opportunities of witnessing the diseases of early life: surely, then, a reference to such experience, and to the journals of the public institutions, would have afforded the most convincing proofs of the accuracy or inaccuracy of my statements as to the professional attention which the disease has received. I would almost venture to abide by such reference: I mean a reference to the admission-

books of the public institutions. But even if, upon such investigation, it should appear that cases of the disease as described have been noted, still I should be justified in relating my cases, because, although the cases which might have been admitted to these establishments had been noted in their records, yet the particulars had not been submitted to the public.

It is objected that I have related only eleven cases, the date of the earliest being 1818, and that I have nowhere stated that I have seen more. Now, eleven well-authenticated cases, the nature of which has been clearly and distinctly defined, (and surely I have taken sufficient pains to establish the nature or nosological character of these cases,) are as sufficient to prove the existence of a disease, and to estimate the efficacy of any remedy, as eleven hundred, or even eleven thousand. Surely the Reviewer must have perceived that the selection of cases was made with the view not only of proving the efficacy of the phosphate of iron, but also of illustrating the action of the causes which I have enumerated as capable of exciting the disease. It is rather singular to find the Reviewer decidedly differing as to the causes which I have enumerated, and yet declaring that my views are nothing more than a transcript of those of preceding observers. Of the efficacy of the phosphate of iron in reducing the flow of urine, even in the most confirmed diabetes, I have lately had a most satisfactory and convincing proof. The case occurred in the practice of my friend, Mr. Jeston. It is that of a married woman, whose mother died of this disease, and in whose family it seems to have prevailed as an hereditary affection. The quantity of urine discharged in twenty-four hours amounted to between five and six, and sometimes seven quarts. It was so sweet as to resemble syrup, and the specific gravity amounted to 1.047, and sometimes 1.049. The phosphate of iron has repeatedly reduced the quantity of urine from twelve to five pints,* and even under. The specific gravity also was considerably reduced, and at one period the urine had lost its sweet taste.

The Reviewer seems to run into an extreme the very opposite of that which he condemns in me. He accuses me (though I think very unjustly) of looking upon every disease with which diabetes may happen to be either complicated or co-existent, as secondary to it; and criticises me for precipitancy in excluding such antecedents as pulmonic diseases from the class of what are termed, in medical language, "causes." With respect to those diseases which may happen to prevail at the same time with diabetes, they may be either complicated with it,—that is, so related as to be either causes or consequences,—or they may be merely co-existing affections, wholly independent of each other, and in no way related as cause and effect. Before the Reviewer censured me, he should, either from his own experience or that of others, have established, first, the relation between diabetes and those co-existing affections; and, secondly, that the co-existing affections are actually and truly antecedent diseases. It is consistent with my own experience, and I believe it will be confirmed by a reference to the clearest and best histories of the disease, that diabetes may have existed for a long time without any remarkably severe derangement of the health; and even the fever, thirst, and voracious appetite, are frequently absent, or prevail to such a trifling extent as to excite but little attention. But still further, I believe it will be allowed that the diseases of other organs seldom appeared till the health had been considerably undermined by the disease of the kidneys. In the morbid anatomy of the disease, it is well established that the kidneys are invariably diseased to a greater or less degree, but still always severely. If we pursue the inquiry further, we shall find that other organs are frequently involved in disease, but there is no precise order,

* Opium was also freely administered.

either of parts or of morbid condition; so that in some instances one organ is affected, in other cases another; in some the morbid condition is of one kind, in others of a different. Upon this subject I must beg leave to quote a passage from the last edition of Dr. Hooper's Dictionary:—"The liver, pancreas, spleen, and stomach are, *in general*, perceived to be in a natural state: when they are not so, the occurrence is considered to be accidental." How far this passage corroborates my views, I shall leave the reader to decide.

It is stated that gin comes under my ban. It is a singular circumstance, (of which, however, I was not aware till the work had been published,) and one which tends strongly to confirm the propriety of the denunciation, that English gin is highly adulterated with turpentine. That such a preparation is calculated to excite the kidneys, the Reviewer, I have no doubt, will willingly concede. In a conversation some little time since with my friend Mr. Brooks, he mentioned that bricklayer's labourers were more subject to diseased kidneys than the generality of other persons.* Bricklayer's labourers are the persons who prepare the mortar, or work up the caustic lime into this cement, and are therefore exposed to the alkaline effects of the lime in the most eminent degree. When handed to the bricklayer as mortar, these properties are nearly neutralised. We know that the individuals engaged in smelting and working the metallic ores containing arsenic and lead, are extremely liable to paralysis, colic, and the other diseases which arise from the internal use of these poisonous minerals. May not the peculiarity of disease to which bricklayer's labourers are subject, be accounted for upon similar principles. This observation I have adduced as strongly corroborating my views with respect to the deleterious influence of the alkalies upon the kidneys.

I have not been so fortunate as to have had an opportunity of consulting Dr. Latham's work, and therefore, whatever coincidence of principle or experience may exist, must be highly gratifying to me. Had I, indeed, been constructing a SYSTEMATIC TREATISE upon Diabetes, I should have felt it incumbent on me to consult every authority upon the subject; but I have distinctly stated that I send it forth as a mere practical summary, furnished entirely from the resources of my own experience. The phosphate of iron is not mentioned as a remedy for diabetes in any work, systematic or specific, upon this disease, to which I have had access; nor is it mentioned, or even its use adverted to, by Prout, the latest writer upon this disease. Surely, if Dr. Latham's suggestion had been more generally known, the different writers upon the disease would have taken some notice of the remedy: and, as my experience is so ably supported by Dr. Latham's, the publication of my cases may tend to bring a neglected but really efficient remedy into more general notice, and thus extend its use. So far allowing that Dr. Latham's application of the remedy and mine were precisely the same. But I maintain, and I rest my assertion upon the passage selected by the Reviewer himself, (not having seen the Doctor's work,) that my application of the phosphate differs, *toto cælo*, from that of Dr. Latham. "For the purpose of *restoring the vigour of the system, when the diabetic tendency has been checked, nothing would perhaps be better than iron combined with phosphoric acid, as it is found in the phosphate and oxyphosphate of that powerful mineral; and, when a purgative is wanted, soda phosphorata should always be preferred. In chronic diabetes, more especially, I have seen this plan very beneficially employed.*" From this passage, therefore, it appears that Dr. Latham merely suggests its use as a tonic when diabetes

* Mr. Brooks has been thirty years in practice, and the observations of thirty years' professional experience are entitled to every respect.

has been cured. I recommend its use from the very beginning, as forming a powerful part of the means for effecting that cure; and the cases which I have related fully warrant that recommendation; and may prove further useful by exciting more general attention to Dr. Latham's work. But should it even appear that Dr. Latham has anticipated me upon this subject, so far from feeling either chagrin or disappointment, I should be truly rejoiced to find myself so ably supported.

The last observation I shall make upon this subject is the following:—“Another plan of treating the disease, (says Dr. Hooper, in the last edition of his Dictionary,) has been more recently proposed, namely, by bleeding and other antiphlogistic means, and some cases of its success have been recorded; BUT FURTHER EXPERIENCE IS CERTAINLY REQUIRED, before we should be justified in relying much upon it.” Surely, where there exists such indecision and doubt upon the propriety of antiphlogistic means in the treatment of this disease, the history of eighteen cases, in which antiphlogistic means formed so prominent a part of the method of cure, must have some interest.

Evidently the Reviewer thinks very meanly of this production: however, it is consoling to me to reflect, that I hold in my possession the opinion of professional authority, I have no hesitation in asserting, as respectable as the Reviewer, and which has pronounced far more favourably of its merits. Notwithstanding, I have no objection “to drink at the fountain-heads,” while Latham and Prout supply the stream.

Henley-upon-Thames;

10th March, 1826.

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A
VINDICATION
OF
READ'S
Patent Syringe,

Against interested opposition and unphilosophical objections,

WITH
PROFESSIONAL TESTIMONIALS

OF ITS
SUPERIOR UTILITY,

AND
*Directions by which its employment is rendered easy and
certain.*

BY JOHN READ,

Maker to the Army, and the Honorable East India Company's Forces; Inventor
of the Veterinary Syringe for removing Intestinal Obstruction of Horses, and
Sporting Dogs; and for relieving Blown Cattle, &c. &c.

"Probatum est."

LONDON:

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VINDICATION

4 VINDICATION

READS PATENT SYRINGE

READS PATENT SYRINGE

in the month of August 1851, I took out a Patent for a
superior utility, which was then granted the attention of
the Legislature and the public, and only in the Kingdom, but
of foreign States also. The principal aim of this instrument
was to provide by which its employment is rendered easy and
from the economy; although it is subordinate to several other
valuable purposes which I shall hereafter enumerate.

The Cylinder of the Syringe is about 7 inches in length,
and 1 of an inch in diameter, the piston is contained and
slides freely in an opening somewhat smaller than the
cylinder, and the piston is provided with a small
opening in its upper part of the cylinder, where a valve
is formed by elevating the piston, admits the fluid or
gas into the syringe, but as soon as the piston is
depressed, the contents of the syringe pressure the valve
down upon the aperture, and prevents its escape through
the opening by which it was inserted.

A VINDICATION
OF
READ'S PATENT SYRINGE,
&c. &c.

In the month of August, 1820, I took out a Patent for a Surgical Syringe, which has since claimed the attention of the Profession and the Public, not only in this kingdom, but of Foreign States also. The principal uses of this Instrument are, for administering Enemas, and for extracting poisons from the stomach; although it is subordinate to several other valuable purposes which I shall hereafter enumerate.

The Cylinder of the Syringe is about 7 inches in length, and $\frac{3}{4}$ of an inch in diameter; the extremity contracted and perforated by an opening considerably smaller than the internal diameter of the body of the Instrument; within this opening is a chamber containing a spherical valve, which, by rising into the upper part of the chamber, where a vacuum is formed by elevating the piston, admits the fluid to pass freely into the Syringe, but as soon as the piston is depressed, the contents of the Syringe presses the valve close upon the aperture, and prevents its escape through the opening by which it was received.

To give exit to the contents of the Syringe, a side branch is constructed, furnished with a valved chamber, similar to the one above described, but so placed as to act in direct opposition to it; so that when the Syringe has been filled from the extremity, and pressure is made by depressing the piston, the fluid closes the lower valve, and opens the lateral one, and consequently escapes through the latter aperture. To facilitate the operation of the instrument, a small pipe communicates with the upper extremity of the Syringe, which gives free ingress and egress to the atmosphere during the action of the piston, a circumstance essentially necessary in causing the instrument to work easily and perfectly.

The other part of the apparatus consists of a tube 28 inches in length, to be introduced into the stomach in removing poisons; an elastic tube 18 inches in length (with ivory pipes) for administering enemas; and a guard for the protection of the œsophagus tube in operations upon the stomach.

The contents of the case containing the enema apparatus consists of the following:

- 1st—The Syringe, or Pump.
- 2nd—The Enema Tube, armed with a brass socket at one extremity, and a screw at the other.
- 3rd—Three Ivory Pipes and Sockets; the small pipe for children, and the curved pipe for self injection; that which is perforated with small holes being used only in female complaints. The bulb socket is used only in *self* administration of enemas, and in *all other* cases the *flat* socket.

DIRECTIONS FOR ADMINISTERING ENEMAS.

Screw the flexible tube to the side branch of the Syringe, and insert either the flat or the bulbed ivory socket as the case may require, (as explained before) into the opposite extremity, and, lastly, screw into the ivory socket, the proper pipe. The invalid, if in bed, should lay upon one side, as near the edge as convenient, and the pipe being introduced under the bed clothes, either by the patient or an assistant, is passed gently into the bowel. A basin containing the enema is next brought to the bed side, and the extremity of the Syringe being inserted into it, the assistant slowly pumps the fluid into the bowels. As a security against any of the fluid escaping during the operation, the patient may press a soft napkin to the part, which serves also to prevent a displacement of the pipe.

For self injection the patient may sit upon a chair, and place the vessel containing the enema, upon another chair before him, and in this manner, without any assistance, the instrument may be used with the greatest ease and facility. This is shewn by *fig. 1*, of the plate at page 7.—*a.* the enema tube—*c.* the basin—*d.* the curved pipe.

For much interesting matter respecting the utility of enemas, (especially the domestic practice of it) I respectfully beg leave to refer the reader to a valuable little sketch of this subject lately published by Mr. SCOTT.

At the suggestion of some medical gentlemen, I have provided several detached parts to be used with the Syringe, for some particular parts of medical practice which I shall here briefly enumerate.

INJECTING THE BLADDER.

In cases of retention of urine, it frequently happens that in consequence of hæmorrhage and other causes, the catheter becomes so obstructed that the bladder cannot be emptied : It was suggested to Mr. Scott by Dr. Cloquet, a celebrated Surgeon of Paris, to effect this purpose by fixing a pump to the catheter. The Patent Syringe performs this operation with extreme facility, and has been honoured with the entire approbation of Dr. Cloquet. For injecting the bladder, which is an operation every day becoming more frequent, it is of course equally eligible. For these purposes I have constructed elastic gum catheters to be fixed to the extremity of the enema tube—*see e in the following plate.*

As an Apparatus for conveying nourishment into the stomach of Persons afflicted with Stricture of the Œsophagus, the Patent Syringe is found to possess obvious advantages.*

CUPPING AND DRAWING THE BREASTS.

This Pump is also capable of being adjusted to cupping-glasses, by which any degree of exhaustion can be made that the operator desires; and in the same manner it may be rendered a very effectual Instrument for drawing the breasts of puerperal females. I have had glasses made for these uses, which may be obtained with the rest of the Apparatus—*see f. g. in the succeeding plate.*

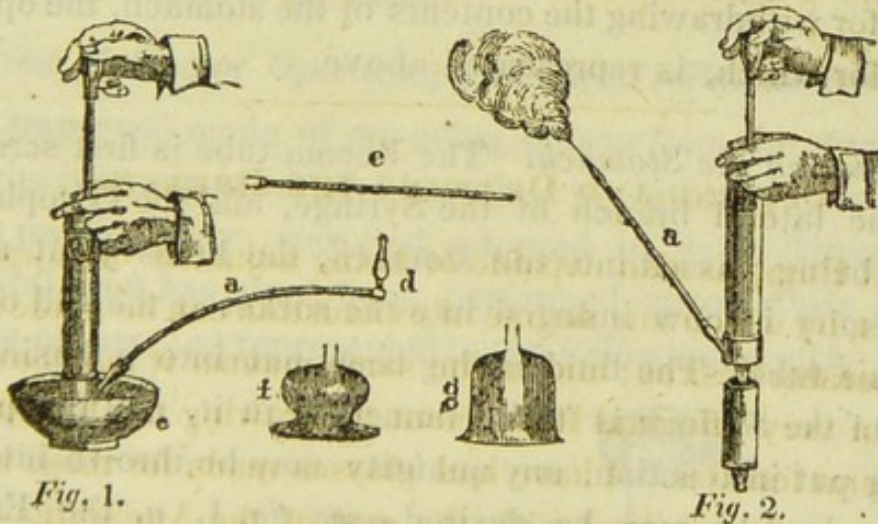
TOBACCO FUMIGATION.

For the purpose of introducing the smoke of Tobacco into

* Stimulating liquids ought also to be carefully thrown into the stomach of persons under suspended animation from drowning, &c.

the intestines, I have fitted a Canister to the Syringe, by which the operation is performed with more certainty and ease than with the old medical apparatus. It is used in the following manner:

Unscrew the cap of the canister, and take out the perforated plunger; put in the tobacco (half an ounce or an ounce) and replace the plunger lightly upon it; then put on the cap and screw it to the end of the Syringe; hold a lighted candle close under the bottom of the canister, and a stroke or two of the piston of the Syringe will light the tobacco. The enema tube being now fixed to the side branch, and the pipe introduced into the rectum, the tobacco smoke is forced into the intestines, as shown by *fig. 2*, in the following plate.



THE OPERATION OF EVACUATING POISONS FROM THE STOMACH.

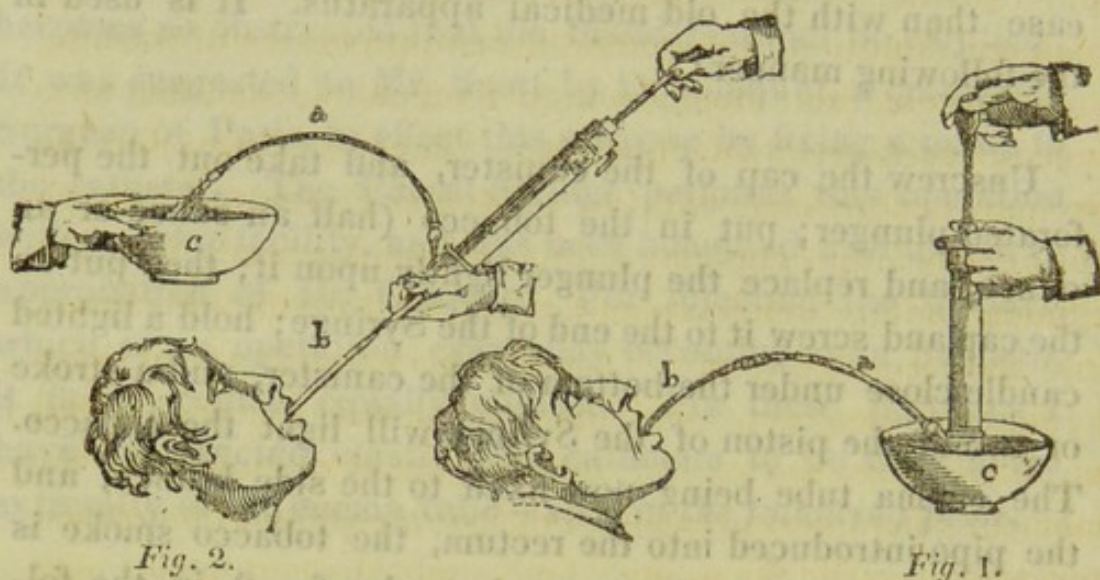


Fig. 2.

Fig. 1.

With the addition of the Œsophagus tube and the guard, the case described at page 4, contains all that is necessary for withdrawing the contents of the stomach, the operation for which, is represented above.

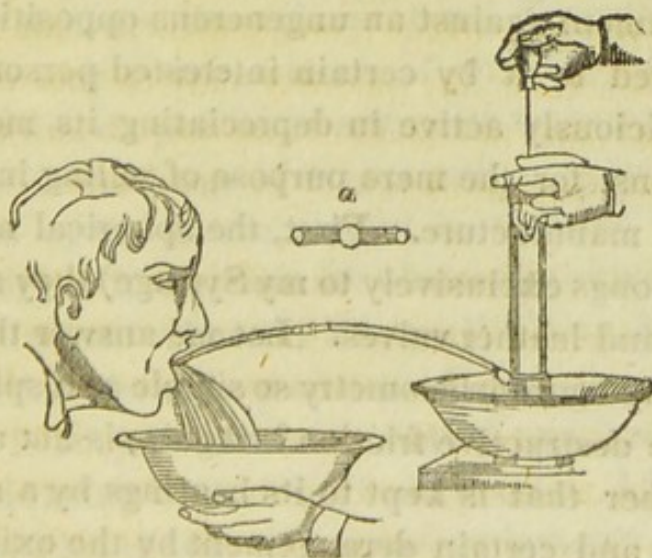
Injecting the Stomach. The Enema tube is first screwed to the lateral branch of the Syringe, and the Œsophagus tube being passed into the stomach, the brass joint at its extremity is now inserted into the socket at the end of the Enema tube. The fluid having been put into a basin, the end of the Syringe is to be immersed in it, and the piston being put into action, any quantity may be thrown into the stomach that may be desired—see fig. 1. *a.* the Enema tube.—*b.* the Œsophagus tube.—*c.* the basin.

Emptying the Stomach. A sufficient quantity of fluid having been injected into the stomach by the above process, the Enema tube is to be withdrawn from the Œsophagus tube (without removing the former from the Syringe, or the latter from the stomach) and the joint of the Œsophagus tube inserted into the extremity of the Syringe; let an assistant now hold a vessel to the end of the enema tube, and by work-

ing the piston, the contents of the stomach may speedily be pumped into it, as is shewn in figure 2, of the drawing. By thus transferring the end of the œsophagus tube from one situation to the other, the two processes of washing and emptying the stomach may be repeated as often as is judged necessary by the operator. Thus it is seen that the Syringe is furnished with two valvular apertures, through *one of which* the contents of the stomach passes into the cylinder, and are then immediately forced through *the other*, into the receiving vessel. This double operation is effected by repeated strokes of the piston, which slides so easily, that an infant may use it.—In withdrawing the contents of the stomach, the lateral branch of the Syringe should be turned upwards towards the patient's face, and the instrument may be held a little obliquely, which preserves the valves upon their proper bearings.—*see fig. 2.*—*a.* the Enema tube—*b.* the Œsophagus tube—*c.* the basin.

The New Method of Operating with Read's Patent Syringe

An improved mode of removing poison from the stomach with the instrument which I have had the honor of introducing to public notice, was first adopted in Saint Thomas's Hospital, and has since been performed successfully in a variety of cases, as represented in the following sketch.



a.—Guard, to be introduced between the teeth, for protecting the Œsophagus tube from injury.

This is by far the quickest, easiest, and most simple mode of operating that has hitherto been devised, requiring no shifting of the apparatus, nor interruptions of the operation. It consists simply in filling the stomach, (according to the method of fig. 1, in the preceding plate,) until surcharged, or until it begins to re-act upon its contents, when the fluid regurgitates by the mouth. The pumping being now continued, the contents of the stomach are washed up, and forced, by the power of the pump, through the œsophagus (by *the side* of the tube,) into a vessel held under the chin to receive it. The operation may be continued as long as the Surgeon thinks proper, or until the fluid returns unchanged, which indicates the thoroughly cleansed state of the stomach. The operator may occasionally suspend the action for an instant, if necessary, to allow the patient to inspire. By this means the fluid may be injected in the quantity of three quarts a minute.

As an Apparatus for conveying nourishment into the stomach of Persons afflicted with Stricture of the Œsophagus, the Patent Syringe is found to possess obvious advantages.

I shall now make a few brief remarks in vindication of my instrument against an ungenerous opposition which has been offered to it by certain interested persons, who have been maliciously active in depreciating its merits by false insinuations, for the mere purpose of selling instruments of their own manufacture. First, the spherical metallic valve (which belongs exclusively to my Syringe) they say is inferior to spiral and leather valves. Let me answer this by asking, is there any figure in geometry so simple as a sphere, or liable to so little destructive friction? Again, is not a spiral valve or any other that is kept to its bearings by a spring, liable to speedy and certain derangement by the oxidizement occasioned by alternations of moisture and dryness? And

further, does not the natural hygrometrical property of animal substances which subjects them to a wide range of expansion and contraction, render these substances highly unfit for the nicety of valvular coaptation, and do they not by the chemical agency of heat and moisture, undergo an alteration in structure that proves destructive to their use? Secondly, my adversaries assert, that the valves of my Syringe become choked in those cases where it is necessary to inject a glutinous fluid, and if laid by without cleaning after such an operation, would be found clogged up when subsequently wanted. The first part of this assertion is not only a base falsehood, a gratuitous lie coined to pass current with other forgeries with which they endeavour to ruin the merit of simplicity, but it is an actual absurdity in experimental philosophy, and its fabricators, had they known any thing themselves of hydrostatics, never could have expected to impose a belief, even on the most credulous, that *a fluid*, though it were as tenacious as bird lime, could resist a pressure upon its surface (with a vacuum behind it) equal to 15 pounds to a square inch. But this calumnious assertion has been disproved by reiterated cases in which glutinous fluids have been injected, and I defy my adversaries to produce a single instance of what they advance. I boldly assert there is no fluid either natural or artificial, that can obstruct the valves of my Syringe; and I will engage to empty the stomach of an Alderman, though he may have dined upon turtle-soup with macaroni, and washed it down with mucilage of tragacanth or quince seeds. But the cream of the above charge is, that the valves will be found clogged if they are not cleaned after glutinous fluids have been used. Cunning Rogues!! Pray, Mr. Wiseacres, do you ever dissuade a customer from buying a lancet because it is subject to become rusted and "*clogged*" if put up without being cleaned? Prodigious!!! I know not what notions of cleanliness these persons imagine Medical Gentlemen possess, but for my own part, (in Enema cases for

instance) if the operator were to put his instrument up "*sans ceremonie*" I should certainly expect to see him pocket the rectum pipe with an equal indifference.

Another equally untenable objection has been raised to the instrument, in consequence of a trifling attention being necessary as to position in withdrawing the contents of the stomach. In a former notice of this subject, I happened to say that the degree of inclination at which the Syringe should be held in this part of the operation, should make an angle of 45° ; this remark has been a good handle for our interested hypercritics to turn the subject to my disadvantage. They have asserted that my Syringe cannot be used except it be held in *one particular* position, to discover which they modestly and humbly submit, would, in most cases, be an insurmountable attempt, from the want of mathematical knowledge in taking angles!!! Now the truth of the matter is simply this, that the position which I recommended (as shewn by the drawing page 8,) is really one to which *convenience* alone would involuntarily conduct the operator's hand if he had never been told a word about it. Let the reader imagine that he *stands* with the Syringe in his hand, fixed to the extremity of the Œsophagus tube projecting from the mouth of the patient, who is *seated* or *laying* before him, and the position of the Syringe he will find corresponds with that represented in the cut, *fig. 2*. When I alluded to the propriety of holding it at an angle of 45 degrees, I referred to the mathematical principles of the instrument, the valves of which lay directly on their bearings at this point of the scale; but I by no means intended to say (nor could it be so understood, except by wilful misinterpretation) that no other position could be effective; it is just otherwise; for the valve of the lateral branch of the Syringe covers its bearing, if the instrument be inclined to a level with the horizon, and it will sustain its proper seat upon the aperture during a *lateral* motion of half a circle. It resolves itself at

last to this, that by the simple rule of keeping the lateral branch of the Syringe *upwards*, the instrument will act perfectly, and cannot fail.

My opponents have endeavoured also to depreciate the value of the instrument by asserting that much valuable time is lost in shifting the tubes during the operations upon the stomach. Had such a complaint proceeded from a medical practitioner, or any one who had actually performed or witnessed the operation, it would, indeed, be sufficient to "make the judicious grieve;" but coming, as it does, from persons incompetent to give an opinion, (the truth of which would be suspected even if they were) it can be viewed only as the dicta of "envy, hatred, and malice, and all uncharitableness:" that time is lost nothing can be more untrue, as will appear by the testimonials which I have presently to submit, of which any person may readily satisfy himself by a trial.

The size of the Syringe has been supposed by some persons to be too small, and they have imagined that with a larger instrument they could propel fluids with more power; but it is just the reverse, it being an acknowledged law in mechanics, that as you enlarge volume you increase resistance, and as you encrease resistance you diminish power. The force, then, with which fluids may be propelled with my Syringe, is four times greater than it would be if the instrument were twice its present size, and as that even, would not be half so large as other Syringes sold for this purpose, its power when compared with them is (to say the least) as 16 to 1, and with some infinitely more. The bulk of the fluid contained in the instrument is so small, that the force necessary to propel it, scarcely requires the efforts of an infant; but the effects of these efforts, multiplied by repetition, increase to an almost infinite ratio, and at length present an overwhelming force, capable of bearing down all

opposition, and overcoming all natural restraints. To try the power of the syringe, I fixed the injecting pipe firmly into the rectum of an Animal that had been recently killed, and proceeded to pump into the bowels a large quantity of water, and I continued the operation with the same ease and freedom, until the intestinal canal, stretched beyond its tone, burst with the distending force.

Notwithstanding the smallness of the instrument, it is capable of injecting a larger quantity of fluid in a given time than is requisite in any case, particularly in Enema practice, where it is necessary to move the piston slowly, and allow a little time between each stroke.

My avocations in life have led me through all classes of society, and, amidst the variety of my duties, I have been honoured most particularly with the patronage (and I trust it will not be deemed presuming, if, in the gratitude and warmth of my feelings, I add, the *friendship* also) of the Medical Gentlemen in the counties of Kent and Sussex. During one of my occupations of this nature, with that respectable and amiable man, Mr. Newington, Surgeon, of Goudhurst, (in the year 1819) I learned that himself, and Dr. Wilmot, of Hastings, had recently lost a patient (whom they had been conjointly attending) with obstruction of the bowels. I ventured to enquire of these gentlemen, if there was no apparatus by which mechanical distension might be effected in these cases; they replied, that surgeons possessed no instrument by which a sufficient accumulation of fluid with an efficient power, could be properly directed. Convinced, as I was, from hydraulic principles, that both these objects could be easily effected, I instantly turned my attention to the subject, and in the course of the following year, I perfected my Injecting Syringe, for which I obtained a Patent in the month of August, 1820. By order of Sir William Blizard, I submitted the Instrument to the inspec-

tion of the Court of Examiners, at the Royal College of Surgeons, who highly approved of it. Mr. Abernethy, in particular, was pleased to express his approbation of the principle upon which it was constructed. During the year 1821, most of the surgeons of this part of the country had possessed themselves of the Instrument, which having given them the most satisfactory results, they very liberally and *unsolicited*, gave the following testimony of its utility :

(COPY.*)

" We, the undersigned, Professional Men, strongly recommend the use of the PATENT INJECTING MACHINE, Invented by MR. JOHN READ, as being the most efficient Instrument for the purpose of removing Obstructions in the Bowels; and declare that we have had, by experience, proofs of the most decided advantage it has over every other Instrument within our knowledge, invented for the same purpose."

" Robert Montague Wilmot, M. D.		Hastings.
Robert Watts, M. D.		Cranbrook.
William Duke.	Surgeon,	Hastings.
Thomas B. Satterley,	Do.	Do.
George Taylor,	Do.	Do.
James Duttan,	Do.	Do.
Robert Ranking,	Do.	Do.
Charles Stephen Crouch,	Do.	Do.
Robert Watts,	Do.	Battle.
James Watts,	Do.	Do.
Stephen Monkton,	Do.	Brenchley.
Jonathan Monkton,	Do.	Do.
Samuel Newington,	Do.	Goudhurst.
Charles Newington,	Do.	Ticehurst.
Edward Morris,	Do.	Tunbridge.
Richard Thompson,	Do.	Rochester.
Avery Roberts,	Do.	Lewes.
Henry Verral,	Do.	Do.
John Vine,	Do.	East Peckham."

* Were I desirous to increase the List, I might obtain the signatures of five hundred practitioners, who have more lately satisfied themselves

In corroboration of the good effects of this instrument in obstructions of the bowels, I shall take leave to extract the following remarks from some of the most respectable medical publications of the present time.

“Dr. Chisholm has related a case of obstinate constipation of the bowels, relieved by *Read's Injecting Machine* after various other means had failed. The obstruction had existed three or four days before Dr. Chisholm saw the patient with Mr. Beet, Surgeon, of Ashford. When seen by Dr. Chisholm, the patient's extremities were cold, and stercoraceous vomiting had come on. A tepid solution of yellow soap was prepared, and more than *a wash-hand basin full* was gradually but perseveringly thrown up by means of the instrument above mentioned, and prevented from returning by napkins pressed to the anus. *The patient's belly now resembled a drum.* When the injection was allowed to come away, the spectators had the gratification to find it mixed with fœces. Shortly after this, the patient passed flatus and stools, and all the bad symptoms quickly vanished. “‘I have had many other cases’” says Dr. Chisholm, “‘where *Read's Machine* was of infinite service, and I think every medical practitioner should have one in his possession.’”— (*Med. Repos. No. 1, New Series, Page 944.*)

A recent Medical Author, under the article costiveness, makes the following remark : “ But the use of clysters is in every way preferable to purgative medicines, and those who are costive should provide themselves with “ *Read's Patent Syringe*,” and administer a pint of the domestic enema every day at a certain hour, until the bowels act without.” The

of the utility of the Instrument, but I prefer this document in its original state, as a *voluntary* testimonial at a time when the Instrument was little known, and had nothing but its simple merits to recommend it.

same author treating upon Iliac Passion remarks that "a copious injection of six or eight quarts of warm water, or gruel, will be the most likely means of removing the obstruction, restoring the bowels to their proper situation, and of softening and bringing away those hardened motions, which accumulate in the bowels and occasion the complaint. For this purpose (as well as for the injection of tobacco smoke,) *Read's Patent Syringe* is preferable to all other instruments, and should be in the possession of every family."

I am informed by some Medical Gentlemen who have used it, that in violent cases of *Menorrhagia*, they have been able to check the disease more effectually by an alum injection thrown by the force which the Patent Syringe affords, than by any other means.

Mr. Scott in his "sketch of the utility of Enemas," makes the following remarks upon the effects of costiveness.

"To obviate these complaints, recourse is generally had to the use of purgative medicines, which most frequently aggravate the mischief and occasion new disorders. In this species of practice, the French and other continental nations have long pursued a much more rational and beneficial mode of treatment; instead of swallowing a host of drastic drugs which nauseate the stomach, irritate the bowels, and disorder and debilitate the constitution at large, they apply a simple remedy at once to the offending organ in the form of clyster, which if properly prepared and administered, softens and dissolves the contents of the bowels, removes obstructions by the mechanical distension it produces, and by its gentle stimulus restores a healthy tone and action, without inconvenience, debility, or pain.

"To give, however, this desirable plan its proper efficacy, an instrument was wanted, not only adapted to domestic use,

but which could meet all the exigencies of those severe cases of obstruction that often baffle medical skill, and terminate fatally. For the first purpose, it was necessary that the machine should be so constructed that an invalid should be able to use it *without assistance*: and for the second, that it should be capable of transmitting *any quantity* of fluid desired, with a power equal to the resistance it might experience.

“ This has lately been effected by the invention of a small Syringe or Pump, by an ingenious person, named READ, which is more suitable to this operation than any other instrument hitherto used. The Cylinder of this Syringe is not more than three quarters of an inch in diameter, and three inches and a half in length, and receives about an ounce of fluid, which is admitted at the extremity, and discharged through a small branch at the side attached to a long flexible tube that conveys it to the bowels. Notwithstanding the small size of this instrument, a large quantity of fluid may be injected in a very short space of time; in fact, it can be made to pass with a velocity not requisite in any case to which it may be applied, *viz.* at the rate of three quarts per minute. The French and other Clyster Syringes (containing a pint or more) are much too large to be either convenient or efficacious; in the first place, if there be any obstruction in the intestinal canal, or the bowels oppose the passage of the injection by any degree of reaction (which they usually do) the force necessary to propel so large a column of fluid requires the arm of a Sampson or a Hercules; and secondly, the clumsy size of these instruments renders their use so awkward, that the patient is often much hurt by the attempts to effect the operation. Besides this, if a large quantity of fluid be necessary (as in cases of intromission, obstinate constipation, &c. where several pints or even quarts are often thrown up) the operation is unavoidably suspended as often as the instrument requires to be recharged, and this, perhaps,

several times successively. There are, also, serious objections to Machel's canister apparatus, the fluid contents of which are forced into the bowels by the agency of condensed air. One of the evils of this instrument is, that part of the confined atmosphere rushes through the liquid injection and passes into the bowels along with it, occasioning, of course, mischievous and hazardous consequences; and again, as the injection is forced out by the expansive action of the compressed air within the canister, consequently, the propulsive power *lessens* as the operation *proceeds*, which is directly the reverse of what ought to happen, for with an accumulating resistance and volume anteriorly, the *vis a tergo* ought to be, of course, proportionally increased.

"None of these objections appertain to READ'S SYRINGE, the action of which is so easy that it may be worked with a finger and thumb, whilst its power is so great that all resistance yields to it without any increased efforts."

I shall add one more testimonial in favor of my instrument as an Enema Syringe, which is a letter I have just received from a surgeon, whose talents and experience are held in high estimation in the counties of Kent and Sussex.

Goudhurst, March 20, 1826.

MR. READ,

After five years observation, I am so convinced of the great utility of your Enema Syringe, that I think an acknowledgement of this conviction is due to you; and so perfectly am I satisfied of its superiority above any other apparatus of its kind, that I should be wanting in justice to the profession, the public and yourself, if I longer neglected to recommend it strongly to their attention.

I am, your's, &c. &c.

SAML. P. NEWINGTON.

As an apparatus for removing the contents of the stomach, my Instrument, as most persons are aware, was first ushered into notice by Sir Astley Cooper, the particulars of which have long been before the public. I shall, therefore, only recapitulate so much of what has already been reported of the worthy baronet's remarks, as tend to contradict an idle assertion, that the Syringe was incapable of removing *mineral* poisons.

In addressing the class who had recently witnessed Mr. Scott's successful experiment upon Mr. Jukes, in the theatre of St. Thomas's Hospital, and that of himself upon the dog, at Guy's Hospital, Sir Astley thus proceeds:

"I certainly think, however, after the experiment which you had an opportunity of witnessing in this theatre, and that of the dog in the other hospital, that the instrument for evacuating the stomach affords the best means of saving persons, who would otherwise perish under the influence of opium. I mentioned to you on a former occasion the case of the young lady who had taken opium, in which every means which I could employ for the purpose of producing vomiting proved completely unavailing. When the œsophagus has lost its functions, which it soon does from the influence of opium, no stimulating substances will produce the least effect upon it. I sat hour after hour, by the side of this young lady, watching her progress to dissolution, without being in the least able to prevent it. If, however I had been acquainted with the instrument which has been since invented, I should have used it with the probability of success. This instrument enables us not merely to remove the poison from the stomach, but to throw in water in considerable quantities, and to introduce stimulating remedies after the opium is removed, for the purpose of restoring the functions of the Nervous system; and this in cases where emetics cannot be even swallowed. I certainly do expect

the happiest results in such cases from the invention of this instrument. The man who first suggested such an idea deserves well of his country, and they who oppose it until the instrument has been fairly tried and found useless, must be destitute of understanding. Persons who object to a proposition merely because it is new, or who endeavour to detract from the merit of the man who first gives efficacy to a new idea by demonstrating its usefulness and applicability, are foolish, unmanly, envious, and illiberal objectors; they are unworthy of the designation either of professional men, or of gentlemen."—*LANCET*, Vol. III. No. 6, page 174.

In speaking of the treatment of poisoning by the oxymuriate of quicksilver, Sir Astley remarks :

"It may appear that I am disposed to think too well of the instrument to which I before adverted, when I state that I believe the Syringe may also be successfully employed for the purpose of removing the oxymuriate of mercury from the stomach. I should certainly prefer it to any other means; but instead of using simple water, I should throw in a quantity of soap and water, then withdraw it; I should repeat this operation until the stomach was entirely cleansed. It has been suggested that although this instrument may be used with success for the purpose of removing the vegetable poisons from the stomach, yet it would not succeed in cases of poison by arsenic or corrosive sublimate. *This I do not believe.* With respect to arsenic, I am aware that if it were taken in a solid form, and a considerable portion had fallen on the stomach it would be impossible to remove it; but as it is usually taken, in powder, I think the instrument is very capable of removing it, because it will be for a considerable time at least kept in solution by the mucus which is thrown from the surface of the stomach, and in this state it may be removed. At all

events this deserves a trial."—*LANCET*, Vol. III. No. 6, page 177.

Several cases in point have since occurred to verify Sir Astley Cooper's opinion, one of which is related by Mr. Campbell, a Surgeon of Pimlico, of a young female, who swallowed, by mistake, a quantity of corrosive sublimate, but instantly discovering the error, a quantity of the white of eggs were administered to decompose the oxymuriate, and the tube being passed into the stomach, the contents were extracted by the Syringe, and the patient experienced no ill effects.—*See the Morning Chronicle of Friday, September 17, 1824.*

A case of this nature occurred also soon after the above. A young woman in a state of pregnancy, endeavoured to destroy herself by taking an ounce of Sugar of Lead. Copious vomiting was produced by very powerful emetics, but the pain of the stomach remained extremely severe. Under these circumstances, Mr. Scott, assisted by Mr. Iliff, of the West London Dispensary, and Mr. Mason, Surgeon, of Newington, injected the stomach with warm water by the Patent Syringe, the force of which dislodged the poison adhering to the inner coat of this organ, and effectually removed the pain as soon as the fluid was withdrawn. In this case also the Syringe, as an enema apparatus, proved most essentially serviceable; for a portion of the lead having passed into the bowels, constipation and colic succeeded, which were removed by an injection of Epsom salts in warm water; six pints of which were thrown up.

Another important and successful operation upon the human stomach, where metallic poison had been taken, has been lately performed by Mr. Roberts, Surgeon, of Brighton, of whose report the following is an abstract.

"A young man having swallowed a teaspoonful of arsenic,

myself and Partner (Mr. Blaker) were called to him. We took with us that excellent Instrument, READ'S STOMACH SYRINGE, and although he made every exertion to prevent us, we found the introduction and application of the Tube and Syringe extremely easy. The whole contents of the Stomach were well washed out, and to make the removal of the arsenic certain, two gallons of water were introduced and withdrawn: the young man, in a few days, was able to resume his occupation.— An attempt has been made to prove that much valuable time is lost through the peculiar mechanism of this Syringe, but I must observe, that if we can remove arsenic from the Stomach with great facility and with sufficient expedition to save life after the Poison has been swallowed nearly half an hour, *there can be no well grounded objection* brought against the Apparatus.

AVERY ROBERTS, Surgeon."

" 15, Jerman Place, Brighton,

Dec. 20, 1825."

The above is also a triumphant reply to the cavilling sophistry of those who artfully insinuate that time is lost in the use of my Syringe' and further to confute the malignant aspersion, I shall add the following testimony, obligingly given me by Mr. Scott, who is eminently calculated to give an uncontrovertible opinion upon the merits of my Syringe, not only from his having been the first person to operate upon the human subject, but from the long and unwearied attention he has devoted to the mechanical construction and philosophical improvement of a proper apparatus for the purpose; to which may be added his experience in its practical application, more cases having fallen into his hands than has occurred to any other professional gentleman in England.

" I have not seen any instrument so eligible for removing poisons from the stomach as " READ'S PATENT SYRINGE."

The simple construction of the pump affords such a ready and unembarrassed action, that the stomach may be cleansed in the space of three or four minutes.

J. SCOTT,"

London, March 25, 1826.

The following remarks are to be seen in Dr. Johnson's Quarterly Review.

"For many months past we have been in the habit of employing Mr. Read's Patent Injecting Apparatus, which is so small as to be carried in the waistcoat pocket, and so powerful as to throw fluids to a great distance. The object of our present notice, however, is to inform our readers that Mr. Read has adapted to the Instrument, a flexible elastic tube, most admirably calculated for throwing fluids into the stomach, and then extracting them in cases of poisoning. We have attentively examined the instrument, and we know it is approved of by Sir A. Cooper, and some of the first Surgeons of the Metropolis; we think it of so much importance, that we seriously recommend it to every private practitioner." Vol. 4, No. 15, page 742, of the Medico-Chirurgical Review.

As a concluding testimony in favour of my apparatus I beg leave to subjoin the following letter, which is authenticated by the signature of the Chairman of the Committee of Governors of the Northampton Infirmary, a favour altogether unsolicited and unexpected.

General Infirmary, Northampton.

SIR,

I am directed by the Committee of Governors of this Infirmary, to convey to you their approbation of your Instrument for extracting poisons from the stomach, and to give

you the details of a case in which it was used with complete success.

A boy, nine years of age, was discovered at eight o'clock in the morning of the 12th ult. in nearly a lifeless state. On investigation it was ascertained that he had taken, by mistake, a solution of opium, three hours before. He was lying in a deep stupor, his respiration very slow, and accompanied with a convulsive catching; his feet, hands, and face livid, and no pulse to be felt at the wrist. He was immediately roused up, and violently shaken, when he uttered a few incoherent cries. A quart of warm water was instantly injected into the stomach by means of your Syringe, and then withdrawn; the fluid was brown, and the smell of opium plainly perceptible. Another quantity of water was then thrown in, and withdrawn; it returned colorless and without any smell.

The boy was now moved continually about for some time, and his senses gradually returned. As soon as he could swallow, he was made to drink two ounces of Ipecacuanha Wine, with a drachm of Sulphate of Zinc, dissolved in half a pint of warm water. This not operating, in twenty minutes a second dose was given as strong as the first, and in ten minutes afterwards the boy showed a disposition to vomit; this was effectually excited by injecting a hand-basin full of warm water, by which I made sure that his stomach should be completely washed of any remains of the poison. After the vomiting was over, he was kept in motion for three or four hours, taking at intervals a strong decoction of coffee: by the afternoon of the same day I had the pleasure of finding him perfectly well.

It is almost unnecessary to observe, that as the opium had been swallowed three hours, (and that too upon an empty stomach,) no emetic medicine would have operated until the poison was withdrawn; the fibres of the stomach being rendered perfectly inert by the stupefactive effect of the drug;

indeed he had totally lost the power of swallowing; it is therefore pretty evident, that the boy's life would not have been saved, but for the very useful Instrument of which you have the merit of being the inventor.

I am, Sir,

With much respect,

Approved,

C. BOUVERIE,

Chairman of the Committee.

Your obedient Servant,

CHARLES WITT,

House Surgeon.

To Mr. READ.

In the preceeding remarks, I have been actuated by no wish to depreciate the labour of other persons, desirous only of correcting misrepresentations insidiously made to disparage my own. Nor have I out of vanity, here adduced the respectable professional testimonials with which I have been honoured, but as a vindication, much more powerful than any that my own feeble attempts could effect, and for which (and to the profession in general from whom I have received many valuable suggestions and the utmost urbanity) I most respectfully beg to offer my humble and very grateful acknowledgements.

30, Bridge House Place,

Newington Causeway, London.

JOHN READ.

April 1, 1826.

. The Instrument is Manufactured and Sold by the Patentee, to whom it is requested Orders may be addressed as above.

READ'S

NEW IMPROVED PATENT SYRINGE,

FOR DOMESTIC & HORTICULTURAL PURPOSES.

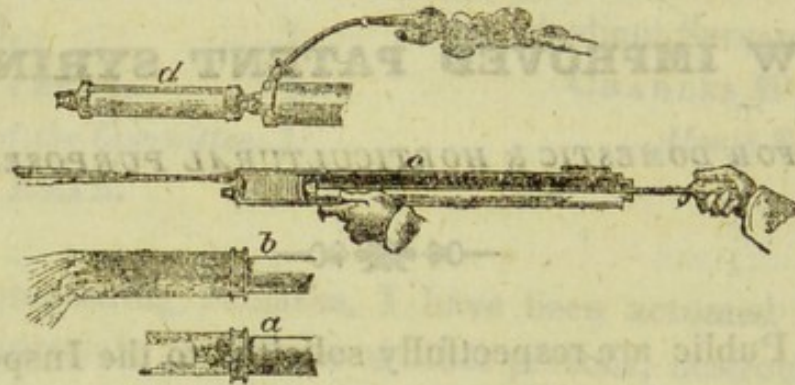


THE Public are respectfully solicited to the Inspection of this Instrument, which for its convenience and utility in Domestic and Horticultural Purposes, claims universal regard. For watering Pines and all other plants in Conservatories and Hot-houses; and for the destruction of Insects upon trees in Forcing-houses or on Walls, it far exceeds the Barrow-engine in the facility of its application. The Horticultural Society of London, to mark their approbation of it, have been pleased to honour the Patentee by conferring upon him their Silver Medal for the Invention. It has of late been much used for washing the Windows of Houses and Carriages, and is found to be a most effective apparatus for Fumigating Trees and Hot-houses.

This Instrument also, in case of need, is an excellent Fire-engine, as from its portability it can be applied, upon the first breaking out of a Fire, when no sort of assistance could be derived from the Engines of the Insurance Companies, and its utility in this way having been proved by actual experience, most of the Fire Offices have prepared themselves with it, and it is now, very properly finding its way into Private Families, as a safeguard against the destructive and hazardous effects of Fire.

Section of the Horticultural Syringe.

- a.*—Cap for destroying Insects on Wall-trees and Plants.
- b.*—Cap for Watering Forcing-houses and trees in Blossom.
- c.*—Cap for Extinguishing Fires.
- d.*—Cap for the Tobacco Fumigation.



EXPLANATION OF ITS USE.

THE Cap *a* is to be screwed on when the Syringe is used for washing away Insects from Peach, Nectarine, and Apricot Trees. Set a pot of water near the stem of the tree, and having charged the Syringe, throw the shower between the tree and the wall, directing it against the *back* surface of the leaves, where the insects are placed, by which mode, the fluid effectually and speedily sweeps off both the insects and their eggs and larvæ, and thus prevents a succession of these injurious animalculæ. The Barrow Engine can only be brought to play upon the *front* of fruit trees, and dislodges, therefore, the insects but very imperfectly, without removing, in the least, their eggs, that stick upon the under surface of the leaf. This Cap is also used for watering Pines.

The Cap *b*, has smaller perforations than the above, and as it throws the fluid in a light and gentle moisture, almost like a dew-fall, is particularly eligible for sprinkling Forcing Houses of all descriptions, and Trees in bloom, and not only clears the latter of insects, but deposits the water in such a gentle manner upon the leaves, that, if it be applied at night, preserves the plant moist until the next morning, materially tends to its nourishment and health, and prevents the formation of animalculæ, which breed rapidly in the *dry* but perish by moisture. The Practical Gardener is aware of this, and takes care, during warm weather, to supply his trees with moisture

while their buds are forming and before the blossom expands. This Cap is used also for washing the leaves of trees, plants, and vegetables when frost-nipped in the cold nights that often prevail during the spring; it should of course be done before sun-rise.

The Cap *c* is used for extinguishing fire and for washing the coarser sorts of trees, as Pears, Plumbs, Cherries, &c. against walls, and for general watering in lieu of the Barrow Engine, and in this way can be applied more efficaciously than the latter, as it may be brought into immediate contact with the plant, or applied in any direction that may be desirable, which the Barrow Engine cannot, on account of the impracticability of bringing it over the beds.

By the application of the Syringe there is no useless expenditure of water, and it is generally found that two, or at most three charges is sufficient for a large tree.

The Fumigating canister *d*, is used in the following manner. Having fitted the brass tube to the side opening, unscrew the top, take out the perforated plunger, and put about an ounce (or as much as is desired) of tobacco (or tobacco paper, as it is called) into the canister, replace the plunger and allow it to sink upon the tobacco with its own weight only, and having put on the top, screw it to the Syringe, and next apply a piece of lighted paper to the nozzle of the canister when one or two strokes of the piston sufficiently lights the tobacco, the fumes of which instantly pass in a copious dense stream from the extremity of the side tube, and may thus be readily conveyed to any plant, or even to any part of a plant. When applied to beds of roses or to plants under walls, the operation is greatly facilitated by throwing a piece of canvas over the bed, or hanging it against the wall so as to cover the trees. The canister is not liable to become choaked as the Fumigating Bellows are, but continues to act freely until the tobacco is entirely consumed.

The Patentee, after an active and extensive experience of Forty Years in Practical Gardening, humbly offers the above explanation of the uses of his Garden Syringe to the attention of young Horticulturists, who may not despise a few simple but useful hints.

Neither of the above Instruments are genuine except Stamped with the Royal Arms and Patentee's Name.

Veterinary Practice.

"A righteous man regardeth the life of his beast."

PROVERBS, chap. xii. v. 10.

ANIMALS, as well as man, are liable to accidents and disorders that demand the aid of medical surgery; and among these, the occurrence of constipation and obstruction of the bowels, and of the fatal effects of excessive abdominal distension, from an undue quantity of improper food, frequently brings a most useful and highly-valued animal into a situation of the utmost danger. Examples of the former are constantly experienced with horses and dogs. The former possess a tendency to costiveness, from the dry nature of the food with which he is supplied, under the general routine practice of feeding; and he is rendered still more susceptible of this state, and consequently of obstruction and even inflammation, by protracted and heavy labour, and by neglect or improper management after severe exercise. It is also a well-ascertained fact, that the sports of the field induce a costive state of the bowels of dogs, that often reduce the animal's condition and health, and not unfrequently destroy his life. The attention of sportsmen and gentlemen cannot, therefore, be too seriously drawn to this subject; and I respectfully beg to solicit their consideration of an instrument by which the lives of many valuable animals have been saved, when every other means had failed. By means of the apparatus represented by fig. 1. of the following plate, enemas may be easily administered either to horses or dogs; and the instrument is such as to admit of any quantity being injected that may be considered applicable to the size of the animal, and to the nature of the case.

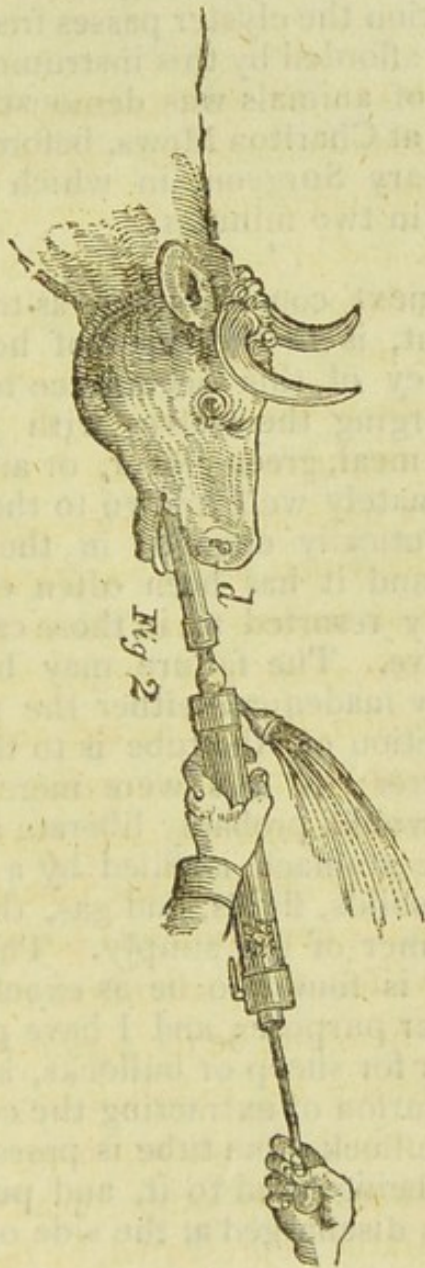


Fig 2



Fig 1

Fig. 1.—*a.* Enema Tube for Horses.
b. Ditto do. Dogs.
c. Vessel containing the Injecting Fluid.

Fig. 2.—Injecting Apparatus for Hoven or Blown Cattle.
d. The Oesophagus Tube for Bullocks.
e. Ditto do. Sheep.

The plate (fig. 1.) represents the action of the instrument: the tube being screwed to the side branch of the syringe, and the pipe introduced into the bowels, the extremity of the syringe is held in the fluid to be injected, (which is put into a pail, or other convenient vessel)-and the piston being put into action the clyster passes freely into the intestines. The facility afforded by this instrument of throwing fluids into the bowels of animals was demonstrated by an experiment performed at Charlton Mews, before Mr. Goodwin, his Majesty's Veterinary Surgeon, in which I injected a clyster of three gallons in two minutes.

The next consideration, as to the applicability of the instrument, is to the cases of hoven (or blown) cattle. The frequency of this occurrence to bullocks and sheep* from over-gorging themselves with potatoes, turnips, flax-seed, ground meal, green clover, or any moist or succulent food, is unfortunately well known to the agriculturist and every person practically engaged in the breed and management of stock: and it has been often experienced, that the means generally resorted to, in those cases, are, but too frequently, ineffective. The failure may be accounted for by observing how inadequate either the puncture in the loin, or the introduction of the tube is to the evacuation of the offending matter; if this were merely gas, either of the above means would probably liberate it: but it should be known that the stomach is filled by a fermenting pultaceous mixture of solids, fluids, and gas, that cannot be discharged in the manner of gas simply. The Patent Syringe before described, is found to be as exactly applicable for this as for any other purpose; and I have prepared tubes to be fixed to it, either for sheep or bullocks, see plate *d. e.* Fig. 2. shews the operation of extracting the contents of the stomach of a blown bullock—the tube is passed into the stomach, and the syringe being fixed to it, and put into action, the offending matter is discharged at the side opening.

* Horses have been destroyed by eating largely of wheat, obtained by their breaking into a barn where it had lately been thrashed out.

Sold by the Patentee, 30, Bridge House-place, Newington Causeway.

