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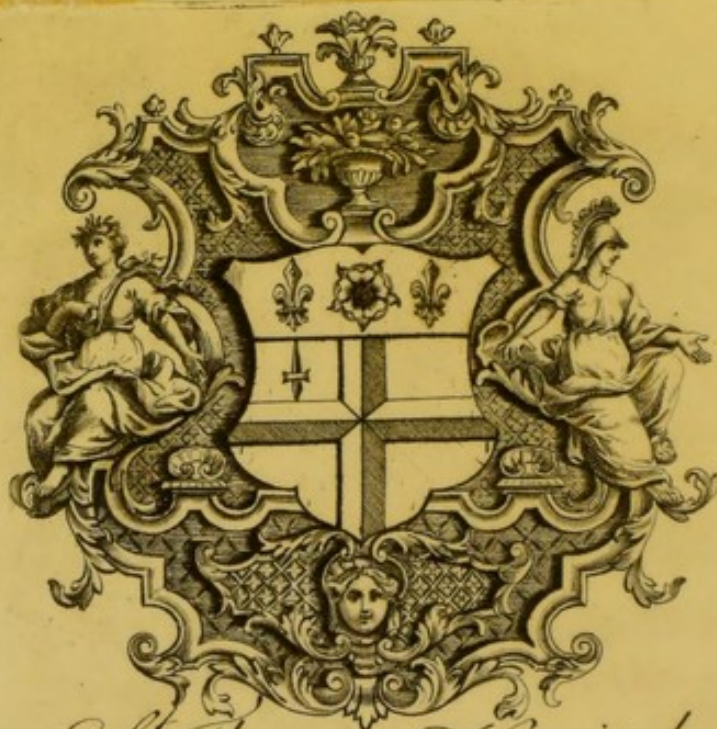
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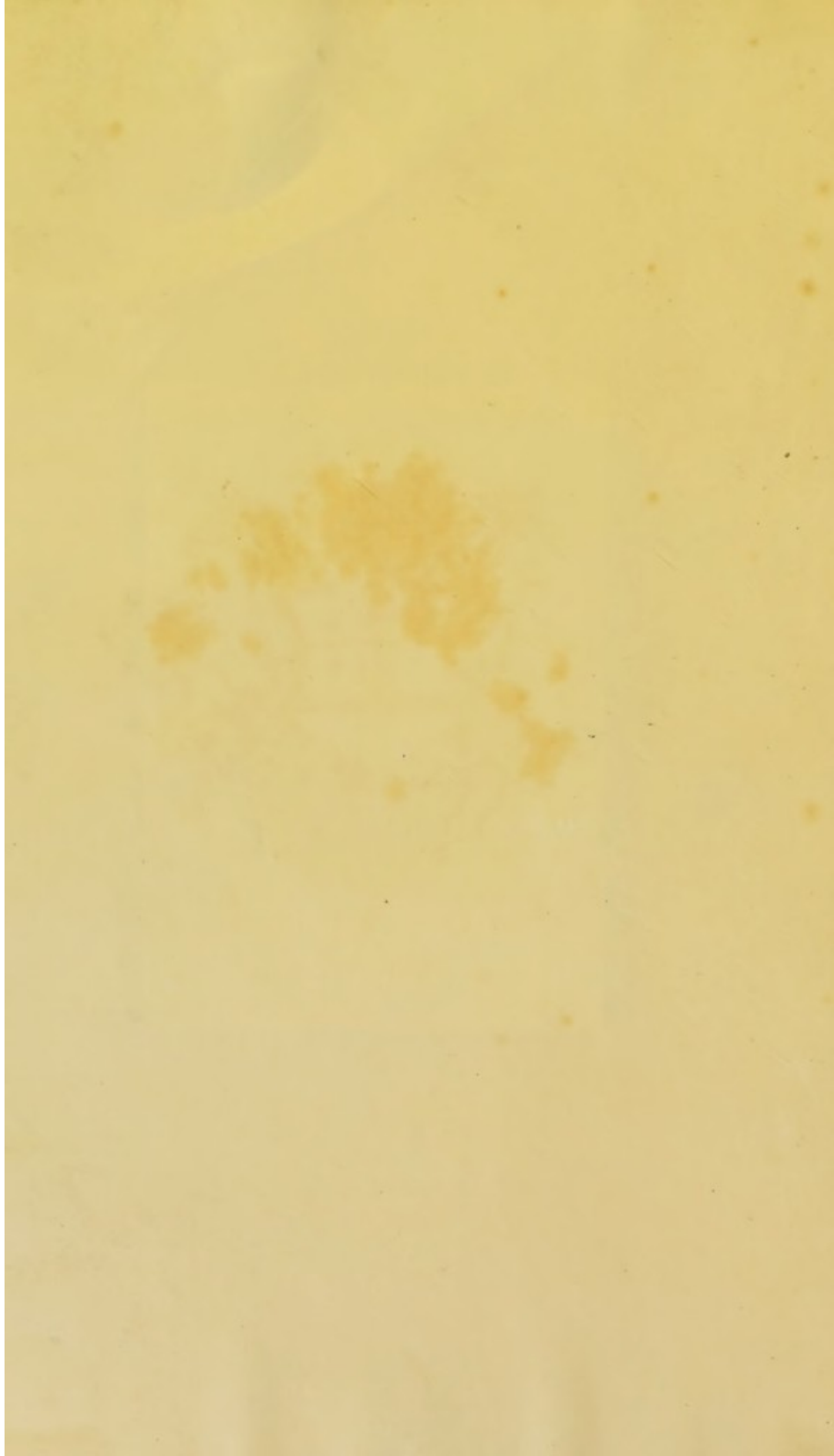
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COLLECTIONS

FROM THE

UNPUBLISHED

MEDICAL WRITINGS

OF THE LATE

CALEB HILLIER PARRY,

M. D. F. R. S. &c. &c. &c.

VOL II.

LONDON:

UNDERWOODS, FLEET-STREET.

1825.

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THORACIC AFFECTIONS.

VOL. II.

B

THORACIC AORTIC

DISORDERED RESPIRATION.

Mode and Diseases of Respiration.

ANY one in health who, in a state of rest, and in a horizontal posture in bed, will observe the phenomena of respiration, will perceive scarcely any elevation or rising of the ribs during inspiration, but, at each inspiration, an evident protrusion of the abdomen. Hence it follows that in such a state of quiescence inspiration is performed by the approach of the diaphragm, which is hollow on the abdominal surface, towards the form of a plane, which therefore depresses and protrudes the abdominal viscera.

We are sensible, however, by the touch that we can, in health and at rest, breathe by the elevation of the ribs, either without employing the diaphragm at all, or at least by counteracting its depression by straining and contracting the muscles of the abdomen. The use of the thoracic muscles occurs in addition to that of the diaphragm, involuntarily sometimes, in the common case of sighing.

A similar assistance of the thoracic muscles is wanted when by exercise we urge the blood with

unusual velocity into the veins of the lungs, and thus render necessary a greater degree of aeration, if I may use that expression, in a given time.

So also, when the stomach is full of food, or the omentum and intestines, and certain other abdominal viscera, are loaded with fat, or if schirrhosities, or preternatural swellings take place in the abdomen, in all these cases the mechanical impediment to the depression of the diaphragm requires the assistance of those muscles which elevate the ribs. It was on this principle that the tight ligatures below the thorax of females, which were sanctioned by the fashion of former days, produced that heaving of the breasts so celebrated by amatory poets, and which formed a species of beauty no longer existing under the more salutary and rational distribution of female habiliments.

The circumstances which I have stated readily explain why fat persons, and even those who, without being fat all over, have a protuberant belly, arising from fatness of the omentum or abdominal viscera, are apt to be short breathed in exercise, and therefore considered as unfit for the athletic and long continued exertions of boxing or running, till, by permanent muscular exercise, they have got rid of that redundancy.

These are cases of mechanical obstruction to the free descent of the diaphragm, which require either the aid of the muscles which elevate the ribs, or else dispose the patient to compensate by the quicker repetition of inspiration for their defect of depth.

Similar means are necessary when from some disorder of the diaphragm itself, or of the parts below,

as in inflammation of the liver, and alimentary canal, and more especially of the peritoneal coverings of the abdominal viscera near the diaphragm, or lining the parietes of the abdomen, the depression of the diaphragm would give pain to those several parts. Hence we find that in some diseases, as for example the puerperal fever, in which the peritoneum is highly inflamed, the respiration is extremely quick and short, proportionably to the number of the pulse.

Let us now examine what is the effect on respiration of causes which exist in the thorax itself. Of these the most simple is a preternatural quantity of fluid in the thorax between the pleura pulmonalis and costalis. The immediate effect of such effusion is to compress the bronchia or air cells of the lungs, and therefore to impede respiration. The inconvenience will be according to the degree, and perhaps the quickness, within certain limits, with which the extravasation takes place; for it seems as if the constitution gradually adapted itself to various deviations from the healthy state, so as to make them less perceived when the approach of the malady was slow.

If the effusion is on one side only of the thorax, it seems to be generally agreed that it is first perceived by some difficulty of lying on the affected side, but that as the quantity of fluid increases, the patient lies most easily on that which is affected. The reason of this difference is obvious. When the pressure on one side is slight, lying on that side increases it. When it is great, the functions of the part are so impaired, that it is nearly useless, and then the only object is to

choose such postures as shall not incommode the other lobe of the lungs which is free; which is best effected by lying on the useless side. When there is fluid in both sides of the thorax the erect posture seems generally easiest for breathing, because the contents of the abdomen then falling down facilitate the descent of the diaphragm in inspiration.

In all these cases, not only the diaphragm acts with force, but assistance is given to respiration by the thoracic muscles, and even by those which elevate the scapula and clavicles. It seems, indeed, as if the sudden removal of mechanical pressure below the diaphragm sometimes diminished the facility of raising the ribs, probably by taking off their habitual support; and by the pressure of a great weight of water on the diaphragm which hangs by them; for I remember to have seen a case of ascites conjoined with hydrothorax, in which the evacuation of fourteen or sixteen pints of water by tapping always appeared to increase the suffocation. Other patients also have been more uneasy in the erect than the horizontal posture, in whom dissection shewed water in both sides of the thorax. It may however be doubted, whether in some of these cases there might not have been some concomitant disease of the heart, which was alleviated by a posture in which all the muscles were most relaxed, and the circulation therefore least embarrassed.

It is curious to observe how wonderfully, without the consciousness of the patient, the respiratory muscles accommodate themselves to the necessity which there is for their use. I have seen four cases, in all

of which probably, and three certainly, as dissections demonstrated, one lobe of the lungs, without any appearance of ulceration, was entirely wanting. In all these cases the ribs fell into a kind of hollow on the defective side ; and it was curious to observe, that the intercostals and other respiratory muscles did not, during the common process of inspiration, at all act in raising the ribs on that side of the thorax, while in the other a very evident elevation was constantly and regularly taking place.

It is indeed possible, that this fact may be explained on mechanical principles. The cavity of the bronchia, and the outside of the thorax being exposed to an equal pressure by the superincumbent atmosphere, little force is required to move those muscles, floating as it were in the same medium. But take away the perviousness of the bronchia, and then the patient has to overcome in inspiration a mass of air pressing on the outside of his thorax, equal in weight to a column, the whole height of the atmosphere.

How difficult it is to raise the ribs by the respiratory muscles of the thorax will appear to any one, who will attempt to make the trial after expiration, with the epiglottis down, by resting in the act of swallowing. It will be found that the elevation takes place to a very small extent, but immediately proceeds when by freeing the epiglottis, the air is permitted to enter the cavity of the bronchia.

The same difficulty occurs in cases of extravasated fluid, confined to one side of the thorax. Place a patient so affected on his back in bed, with the thorax

and upper part of the abdomen naked ; and on your desiring him to take a deep breath, you will often, perhaps always in the very advanced stages of a considerable disease, see the thorax raising itself most, or sometimes only, on the sound side. Another fact here also presents itself, which may help to serve as a designation of the nature and seat of the disease. If, while the patient is in that posture, you press with the ends of your fingers under the edge of the ribs up towards the diaphragm on the affected side, the patient feels little or no inconvenience, but if you press on the other side a violent suffocation is immediately produced. This difference is easily explained by what has been before said as to the effect of lying on the different sides ; and in connection with other circumstances may go a considerable way in ascertaining the nature and seat of the disease.*

In these cases of pressure on the lungs from fluid between the pleura costalis and pulmonalis, the difficulty of inspiring deeply enough for the purpose of health, causes the number of respirations relatively to that of the pulse to exceed the healthy proportion.

The same change of proportion occurs when any part of the pleura, or on some occasions the substance of the lungs, is in a state of inflammation and consequent tenderness ; a deep inspiration in such cases

* It is observed by the Author, that this last observation, as a practical document, ought to be wholly omitted till the history of the disease. It is, however, retained as having, unfortunately, now no other more appropriate place.—ED.

being painful. What is wanting in depth, is therefore made up by frequency.

Nothing, however, is more deceitful than the evidence of a patient's capacity to make a deep voluntary inspiration. I have seen thirty instances of patients, and yet of these some have been labouring under inflamed tubercles, others open vomicæ pouring out the most foetid matter, others water in the thorax in some instances to the amount of several pints, to which each in his turn has fallen a sacrifice, who at my desire have breathed, on a superficial view, to a considerable depth without pain, cough, or difficulty. The fact seems to be that when abscess is fully formed, inflammation has in a great measure subsided; and in all the cases, the patients seem to have learnt to breathe only from the sound parts, besides which they are not ready to acknowledge their own defect of power. An attentive and experienced physician will perceive with pain the self-delusive art by which under these circumstances patients will endeavour to impose on him a sort of half inspiration for one which is profound and free. In such cases, the fallacy is easily detected, by comparing the number of respirations with that of the pulse, when it will be found that the former is relatively greater than it ought to be.

These rules are of great consequence in determining the nature of various diseases, especially in children, who either from want of discrimination, or more usually from those habits of obstinacy which those who have their moral management take so much pains to encourage, can seldom be prevailed on to give any

satisfactory answer, or to submit to any necessary examinations.

There is often in young children a particular affection of respiration, and which is well worthy of being noticed. After every inspiration they suddenly interrupt the relaxation of the diaphragm and intercostal muscles, by means of which the expiration is for a moment stopped, and as those muscles are after an instant relaxed, the expiration is performed with a kind of grunting noise. This operation is, I think, occasioned by a sort of instinctive effort to retain the inspired breath, so as to answer the purpose of aerating the blood where an inspiration sufficiently deep cannot be taken. Such a state therefore, conformably to the explanation given above, affords, I think, an incontrovertible proof of serious thoracic disease. It cannot have any reference to a disease in the abdomen, because it is probable that resting on an inspiration would give pain by the pressure of the diaphragm, and therefore the expiration would be performed as quickly as possible.

From the circumstances which I have stated, it will appear that where, in consequence of disease above or below the diaphragm, inspiration is painful, the patient will usually compensate not so much by labouring for breath, as by short and quick breathing. Where, however, it is difficult without being painful, there the patient will labour to overcome the resistance; and this happens in pure hydrothorax, and what is commonly called spasmodic asthma. In this latter disease, not only the diaphragm is depressed to

the utmost, but the patient assists himself in increasing the capacity of the thorax, by leaning gently forwards, and at the same time by raising his shoulders as high as possible by pressing his hands firmly on some support before or on each side of him. Notwithstanding which, in bad cases, his efforts will be in a considerable degree unavailing, and he will be still compelled to substitute quickness for sufficient depth of inspiration. These rules serve for the slighter cases, and the earlier periods of bad ones. But in all very bad ones, and more especially in their advanced stages, whether the parts are made sensible by inflammation, or not, the necessity of breathing for the preservation of life will overcome the sense of suffering, and cause the patient to inspire as deeply and as quickly as he can.

Circumstances Relative to Respiration.—As even in hydrocephalus (externus), in which there is no complaint about the thorax, the inspiration is at a certain period very slow in point of interval from the end of one to the beginning of another, though each is quickly enough performed, and is sometimes in deep sobs or sighs; and the breath in expiration is long in the act of passing each time, as by an apparent closing of the rima glottidis, in the case of Wm. B., in whom the air generally passes out with a moaning whirring, vibratory noise; is it not probable that the phenomena are owing to some insensibility or incapacity of answering in the inspiratory muscles to the usual stimulus, in consequence of pressure on the brain or medulla oblongata, from which the nerves

supplying those muscles necessarily originate? In this case the retention makes some amends for the want of stimulus to inspiration.

This seems to be the converse of the common spasmodic difficulty of breathing, like that of Miss M., in which the muscles of inspiration act with great strength, there being nothing of actual inability to oppose them, or pain to make the patient unwilling to exert them; while the only difficulty arises from the strong and spasmodic compression of the rima glottidis, whence inspiration, as in the case of croup and whooping cough, is difficult and sonorous.

In certain cases of glandular disease of the lungs, accompanied with hectic fever, as in Miss E., S., who though greatly emaciated by the long continuance of disease, seems not to be violently affected there, but chiefly perhaps in the mesenteric and other glands, the proportion of the respiration to the pulse, as she lay down was as follows: June 26, P. 130, R. 26; June 28, P. 112, R. 28; July 5, P. 132, R. 32. From which it appears that the proportion of the circulation somewhat exceeded that of the respirations. It must be observed, however, that though the pulse was full and regular, the respirations were evidently unusually deep, that is more so than is usual in health, and the skin was rather livid. Here, the patient having no pain or difficulty in respiration, made amends by preternatural depth for want of natural quickness.

Disordered Respiration.—Jan. 15, 1810. Mr. S., about fifty years of age, was affected with violent erysipelas all over the pectoral muscles, and

other parts of the thorax ; and was in some degree delirious, but had no cough. His pulse was 120, and respiration 36. During each inspiration the belly protruded greatly, and the lower ribs were somewhat elevated, but not the upper ; nor was there any elevation of the shoulders. In this case, breathing was extremely painful on account of the external inflammation about the thorax, therefore the diaphragm acted more strongly than usual, the intercostal muscles very little, and the patient did not use great general efforts to inflate the lungs as in asthma ; nor sonorous expiration as in broken wind, but only made amends by frequency for want of depth.

Some days afterwards this patient died, but as he was at a distance from Bath, I was unacquainted with any other circumstances subsequently to my visit.

Facts and Corrections relative to certain Phenomena of Diseased Respiration in the Horse.—March 23, 1809. It is observed of broken winded horses, that they seem unable to expire with facility, and therefore do it as it were by starts, and often with a roaring kind of noise in the throat. This account appears to me to be erroneous.

If we attend to the anatomical structure of the respiratory organs in a horse, we shall find that the cartilages of the trachea are distant from each other, and united by strong muscular fibres placed at right angles to them, or longitudinally relatively to the course of the whole pipe ; in consequence of which the horse has evidently a power of greatly shortening

the trachea throughout its whole extent, so as to make it a sort of rigid tube.

When, therefore, the broken winded horse is compelled to use a certain degree of muscular exertion, and the blood is of course urged fast into the venæ cavæ and so through the right auricle and ventricle into the lungs, the animal, unable to expand the cells of the Bronchia to a sufficient extent to give the blood due aeration, first strives to make amends by frequency of inspiration for want of depth. This process, however, being still ineffectual, he resorts to the farther expedient of voluntarily retaining the breath when once inspired, which he does by strongly depressing the epiglottis, and rigidly fixing the adjacent parts of the trachea. By this process the air is forcibly retained in each inspiration; but as the act of retention becomes at length painful, the abdominal muscles act violently against the resisting larynx, and expel the air with a vehemence, which, according to the various circumstances of contraction in the passage and velocity of exit, give the different phenomena of sound and other deviations from healthy action, which are observed in such cases. The interruption of expiration is therefore not a necessary part of the disease, according to the common opinion, but a voluntary or automatic action in order to relieve it.

At the same time that the horse in expiration coughs or roars, he often passes wind downwards, which is evidently owing to the mere circumstance of the sudden contraction of the abdominal muscles.

in the act of expiration, pressing on the colon, and thus forcing out the wind.

It has been remarked that horses which are broken winded have large bellies. In fact, it is not improbable that a predisposing cause of thoracic disorder may be in some cases a great appetite, or at least such a state of the stomach or colon as may subject those viscera to great and unnatural dilatation. Conformably to this opinion we see the complaint increased by food which much dilates the stomach, as succulent grass, hay, and large draughts of water; so also by food which is slow of solution, as beans, and, on the contrary, I am informed by Mr. Evelyn, that the symptoms of a certain degree of broken wind will be for a time removed by making a horse swallow leaden shot, or pebbles, which probably act by stimulating the stomach to contract itself, and at the same time make it gravitate away from the diaphragm. If such an incontractility or relaxation of the alimentary canal exists, we can easily see why there should be such a flatulency as, aided by the sudden and unnatural contraction of the abdominal muscles, may make such horses expel wind in the act of expiration. We all know that persons in sound health, and with no symptoms similar to those of broken wind, have been occasionally surprised by similar accidents during coughing or sneezing.

In a little black Irish coach-horse, probably 20 years old, and which coughed from the time I first had him, seven or eight years ago, the breath gradually grew worse, and as was naturally to be expected,

was always considerably worse on going up hill. In inspiration, the flanks instead of protruding, appeared drawn in; but the cough appeared most when the breath was best. He eat well, and did not lose flesh. Was opened two days after death, in the beginning of March.

In the abdomen, the colon was enormously distended with air. In the stomach, especially the cardiac portion, there were many bot worms, producing indentations (qu. punctures?) in the internal coat, into which their proboscides were fixed. In the thorax, the heart was full twice the natural size, without the smallest disease in any of the valves, or coronary arteries. There was little blood in any of the cavities; in the left ventricle, grumous; in the right, frothy with air bubbles. In the pericardium there was about a pint of serous fluid tinged with blood, and three or four pints in the thorax. There was no adhesion or other appearance of disease in the lungs or diaphragm; certainly no emphysema in the lungs.

In the upper part of the trachea about the epiglottis, and for three or four inches downwards, the internal surface was red, as from inflammation.

With regard to the holes made by the bots, if they were actual perforations, they were certainly wholly unattended with inflammation.

Difficult Respiration from pressure on the Spine.
—In Mr. I., who had thickening about the upper part of the vertebræ of the neck, with some degree of distortion from venereal affection, there was more or less of dyspnœa, occurring however by fits of

aggravation, and at last proving fatal, without any affection from symptoms of local pneumonic disease.

Habitual *Roughness* or *Hoarseness* of Voice, however slight, is always to be suspected as affording an evidence of disposition to dangerous affection of the respiratory organs.

Disordered Respiration.—In Miss C., with respiration 56, pulse 140, and great affection of the lungs, though with a capacity of lying on either side equally, and down in bed, there was a moaning during expiration, even in sleep, like the roaring, *mutatis mutandis*, of a broken winded horse.

Violent affections of the Breath, Coughs, &c. even though attended with fever, as in my own case, may arise from dyspepsia. The question is, how are we to distinguish these cases? Is it necessary that evident dyspepsia should exist, in order to prove the complaint owing to the stomach? and, on the other hand, is the co-existence of dyspepsia a sufficient evidence of the cause?

Theory of Grunting Expiration.—The grunting expiration which I have mentioned is evidently intended to make amends, by retaining the breath, for the necessity of frequent short inspirations, produced either by pain or difficulty in effecting them, either on account of pleuritic inflammation, or of sanguineous congestion in the lungs or bronchial membrane, from inflammation, as in peripneumony, bronchitis, or in asthma. I prove this by observing, that when for a time the grunting ceases, the respiration does become

actually quicker, and again immediately becomes slower as the grunting commences.

Snoring.—Does lying on the back usually increase snoring, as in Mr. C.? If so, is it not from the pressure on the occipital veins.

Case, and Dissection.—Mr. P., sixty-four years of age, had occasional fits of the gout ; and for many years straightness in breathing, and difficulty of lying down in bed, from what was called asthmatical affection. The present attack seemed a great aggravation of the usual dyspnœa, with violent fever. The attack was exactly of sixty hours length. Dr. Haygarth had proposed bleeding, which was rejected on the ground of gouty habit, and suspicion entertained by former physicians of hydrothorax. He was leeches on the breast, &c. I saw him at nine at night. He was speechless, sweating violently, hot, labouring for breath with a flushed countenance, and a hard full pulse of 120 in a minute. At my request four or five ounces of blood were taken away. It was highly inflamed and firm, and he thought his breath somewhat relieved ; but died a few hours afterwards.

Dissection.—Jan. 29, 1805. The pleuritic covering of the lungs, and of the whole internal cavities of the thorax, was inflamed ; the blood vessels appeared as if filled with a red injection. The lungs were highly inflamed ; they were large and prominent ; on making incisions into various parts, the whole mass, particularly in the left cavity, was of a deep red colour, being very full of blood. From most of these incisions there oozed out a fluid of a white

appearance, full of air bubbles, which, however, was nothing more than the common froth which always arises when the lungs are cut into by the air passing out of the air cells through the healthy serum or ichor. On opening the bronchia there was found a considerable quantity of a white thick fluid, like pus. No abscess was discovered.

There was less serum than ordinary in the thorax, and about the usual quantity in the pericardium.

The heart, liver, and other viscera, had the appearance of health.

Spasmodic Asthma and Nervous Dyspnœa.—Instances of irregular determination of blood to the lungs. They often occur to plethoric and nervous persons; alternate with fits of mania, gout, repelled hæmorrhoids, repelled eruptions; arise from passions of the mind, great heat, or great cold; terminate by expectoration in unusual degree; during the fit they are increased by hot air, and relieved by cold air; they are cured for the time by bleeding, though here the usual objection occurs to general and violent bleedings from producing accumulation about the heart; are cured by refrigerants, and increased by stimulants, by issues, by low or high diet, in the same circumstances as the sick headach.

Case, illustrating the nature of Spasmodic Asthma and that of Gout; with Dissection.—June, 1814. Mr. W., aged fifty-four, tall, of quick genius, much improved by literature, of the most philanthropic disposition, and of social habits, temperate as to

drinking, but an extremely great eater, much on horseback, but using little bodily exercise, was from ten to forty-eight years of age accustomed to epileptic fits, of which he had one on an average every four or five weeks, though at very irregular intervals. For this malady he ineffectually tried various remedies, though the sudden affusion of cold water on his head usually put an end to the paroxysm.

After having for two or three years had considerable diminution of the frequency of his fits, he was seized with the gout in his lower extremities, and from that period never had more than one fit of epilepsy, which was about a month after the first gouty paroxysm. This happened about the year 1807; subsequently to which time the fits of gout were frequent, painful, and accompanied with much inflammatory fever.

For the relief of these attacks he took the Eau Medicinale of Husson, usually in the dose of half a bottle, but twice or thrice to the extent of a whole bottle at once. By this medicine, as is commonly the case, each individual paroxysm was speedily relieved or removed, but the repetitions of paroxysms were so frequent, that in the space of two years Mr. W. took at least ten bottles. For two years before his death, he however wholly desisted from that remedy. From the first appearance of the gout, he had occasional coughs, and once or twice pleuritic affections of a severe kind, requiring active evacuations.

Although Mr. W. had no actual return of his epileptic fits, he had frequent feelings about the head

which made him apprehensive of them. This was especially the case after the disappearance of every gouty paroxysm; and he often started up in his bed in a state of alarm with some breathlessness, which an ingenious physician who attended him attributed rather to his apprehensions of fits, than to any original morbid affection of the respiratory organs. There were times, however, when he could not lie well on his left side; and he had occasional palpitations of the heart and breathlessness on going up hill or up stairs; but it was not unreasonable to attribute these two latter circumstances to his almost total want of bodily exercise, which had for several years taken place, first, on account of some uncomfortable feelings which it produced about his head, and afterwards from the uneasiness which it occasioned in his limbs.

To disorders of the stomach he was extremely subject; but it was evident that this arose not from any want of power in that organ duly to perform its functions, but from the unnatural duty to which it was almost always condemned by meals in the greatest degree heterogeneous, improper in quality, and enormous in quantity. To remedy this evil it will readily be supposed that no means were found so effectual as the habitual use of strong cathartics.

After having been eight or nine months labouring under successive paroxysms of the gout, accompanied with fever, during the severe winter and spring of 1813—1814, Mr. W. came to Bath on the 10th of May. He had at that time no decided external inflammation, but much uneasiness on motion, in

various joints, and at the same time laboured under great hoarseness from recent catarrh. These symptoms were accompanied with great heat, and a quick, strong, and full pulse; and were otherwise so distressing to him, that I advised his losing blood. Ten ounces were accordingly taken from the arm on the 14th, and, when cooled, exhibited a firm copious crassamentum, with a thick, concave, fimbriated crust of fibrine on its upper surface. From this bleeding Mr. W. obtained immediate relief with regard to his fever and general feelings; but as his stomach was still occasionally uneasy, he was extremely desirous of drinking the Bath Waters, against which I strenuously warned him. He however did drink them; and at the end of three or four days, had a new and smart attack of gout in his left hand, with a corresponding aggravation of fever. After some days, the right hand became similarly affected, the inflammation in the left having ended by an œdematous swelling in it. Shortly afterwards, the gout by a similar process returned to the left hand. The fever continuing with considerable violence, ten ounces of blood were again taken away on the 30th of May, and, on cooling, exhibited the same appearance as the former.

The patient was now requested to abstain from all fermented liquors, and from all animal food but fish, which he was desired to eat very moderately; and as it appeared probable that he had kept up the state of fever, and consequently reproduced local inflammation, by late hours, and a constant succession of

company, even in his bedroom, he was strongly urged to remit these causes of irritation. Aperients and antimonials were at the same time exhibited.

The inflammation of the hand subsided, by œdema, in the most favourable manner, and he began in other respects to become better ; but no persuasions had any effect in inducing him to relinquish the pleasure of constant society ; a pleasure in which he was the more disposed to indulge, from having found himself for many weeks unable to gratify himself with his favourite pursuit, reading.

A new attack of gout now occurred in his right knee, which had been on former occasions frequently affected. There was, as usual, much fever, which was abated, to all appearance, by the use of effervescing draughts, which were very agreeable to his palate and stomach. By the 17th of June he had regained some power of walking, declared that he felt himself better than he had been for several months, and more especially rejoiced that for some days he had regained the capacity, which he had so long lost, of reading with ease and pleasure. In proportion to this restoration of health he unfortunately exerted himself, saw great numbers of persons during the whole day, with whom he talked incessantly, and detained one friend till between eleven and twelve o'clock at night.

I have reserved for this place the relation, that in the month of October, 1813, the gout with which he had been long afflicted having then abated, he was in the night suddenly seized with a difficulty of breathing, unattended with cough or expectoration,

in which he every moment expected to die. It came on with a rattling in the throat, and continued for some time, but went off before the arrival of the medical man, living in the city in which Mr. W. accidentally was. Some time afterwards, he was visited by the physician, with whom he had long been in habits of friendship; and who, though the paroxysm was entirely past, thought it necessary to bleed him pretty largely.

About 12 o'clock on the night of the 17th of June, a few minutes after Mr. W. had laid down to sleep, he was suddenly affected with a paroxysm of difficulty of breathing, similar to that just described, in which he found it almost impossible to inspire, had a rattling in his throat and chest, expressed an apprehension of immediate suffocation, and in a few minutes became incapable of speaking. I was with him in less than twenty minutes from the commencement of the attack. He seemed to be senseless, but was writhing backwards and forwards on his pillow, apparently striving in a convulsive manner to inhale air, but in vain. His countenance was pale, but there was no cold sweat on his forehead, or any other symptom of syncope. His pulse was extremely weak, and in four or five minutes after my arrival entirely ceased to beat. Shortly afterwards a surgeon, who had been sent for, arrived; but the pupils were irrecoverably dilated, and only half an ounce of blood would flow from the arm.

His body was examined at half-past six o'clock in the morning of June 19, by Mr. G. Norman, in the

presence of several of his pupils, Mr. Dutton, druggist, and myself.

Although the weather was cool, some degree of putrefaction had already taken place.

The several parts were examined in the following order; the knee last affected with the gout; the head; the thorax, &c.; and lastly the abdomen. As, however, the organs connected with respiration were more immediately concerned with the circumstances producing death, it will be most interesting to begin with a description of their state.

There was a great deal of fat, which was not fluid, about the mediastinum and heart. The latter was of a considerable size, very pale and flaccid, free from disease in its valves, and not containing a drop of blood, although it was examined in situ. The internal membrane of the heart, both in the left auricle and ventricle, near the annulus venosus, together with the internal membrane of the aorta, was deeply suffused with blood throughout its substance. In the pericardium there was about half an ounce of bloody serum. The lungs on the left side were every where, except in a very small space, so attached to the ribs, that they could not be separated without the greatest force. In the unattached space, there was a little bloody serum. On the right side there was no adhesion; but the interval between the two pleuræ contained twelve ounces of serum deeply tinged with blood. The cells of the bronchia contained but a small quantity of air, relatively to the effects of putrefaction on other viscera; and the blood in

the lungs was on the whole copious. The larynx and trachea were next carefully examined. The mucous membrane of the lower part of the epiglottis was preternaturally red; and the same membrane from the rima glottidis all down the trachea, to its smallest ramifications into the lungs that could be distinctly traced, was throughout its whole circumference of a damask red colour, amidst which, with a strong magnifier, could plainly seen be very minute vessels full of blood. No extravasated fluid of any kind adhered to the surface of the membrane, or could be discovered within it.

The integuments of the abdomen, and the duplicatures of the peritonæum contained a great quantity of fat, in a moderately firm state. The liver was perfectly sound; but, by the process of putrefaction, air had been so extricated in its substance, as to rise, as it were by effervescence, out of a thousand minute pores, wherever it was divided with the knife. The gall bladder was empty of bile, and void of calculi. The stomach was distended with air, and enormously large, measuring along its greater curvature from the cardia to the pylorus $21\frac{1}{4}$ inches, and in all its other dimensions proportionably capacious. All the other abdominal viscera were in a sound state.

The dura mater adhered very strongly to the cranium, which was extremely thin. The brain being taken out of the cranium, and inverted, we were immediately struck with the uncommon size of the basilar artery as it lay on the medulla oblongata. A ring of it cut off near the union of the two vertebrals,

and gently expanded, after being slit up, measured six-tenths of an inch. Other parts of the great arterial circle at the base of the brain were in a natural state. There was not the smallest peculiarity in any other part of the encephalon or its appendages ; unless it might have existed in the glandula pituitaria, which, unfortunately, was not examined.

The part last affected with gout having been the right knee, we were desirous of minutely investigating its state. It appeared externally to be enlarged, chiefly by a swelling round the patella, in which there seemed to be a fluid. The integuments and fascia extending over the patella being dissected off, a fluctuation was distinctly perceived passing from beneath to above the patella, through the knee joint, and was found to arise from a fluid in that cavity, going up into the sheath of the tendon of the rectus femoris muscle. The cavity being opened, the fluid was caught in a tea-cup to the amount of four ounces. The fascia and other external parts about the patella appeared to be in a healthy state ; but there was evident inflammation on the internal surface of the capsular ligament of the joint, which did not extend to the membrane immediately lining the cartilaginous coverings of the several parts of the joint itself.

The fluid was of a yellowish green colour, slightly turbid, and in appearance exactly resembling the serum of the blood. In it floated a gelatinous semi-transparent lump of the same colour, and several films, partly resembling that lump, and partly whitish, and more opake. The liquid coagulated with heat

into a pearl-coloured horny mass, as did also both sorts of coagula ; and a similar change was produced on all by the nitrous acid.

Hence it was evident that the effused fluid was serum, and the more consistent substances, floating in it, albumen in different states.

This attack, proving fatal in so short a period, was evidently similar to what is called spasmodic asthma, the cause of which, conformably to the opinion which I have long entertained, as an increased and morbid determination to the mucous membrane of the trachea and bronchia, was fully demonstrated in this case by the dissection.

Sudden Attack of Spasmodic Asthma, like that of Mr. W.'s, occurring after the Relief of Gout, but cured by Bleeding.—June 1814. Mr. L., a very strong man, aged about fifty, became affected with the gout in various joints. After a fit of this malady had continued for some weeks, shifting from joint to joint, he became considerably better ; but was suddenly seized with symptoms which he had never before experienced ; a violent weight and sense of stricture across the upper part of the sternum, accompanied with a state of respiration, in which, according to his own expression, he found it almost impossible with all his force to take in any breath, but could easily throw out what was taken in. In this violent struggle, which he every moment expected to be fatal to him, he determined to lose blood ; but the surgeons who were in the habit of attending him were both from home. In this distress he had recourse to a barber

who was able to bleed, and who immediately performed on him that operation. No sooner had two or three ounces of blood flowed, than he found himself greatly relieved ; and the complaint gradually diminished as the discharge continued, and was wholly removed within half an hour after the operation was over. The attack was attended with no cough, and followed by no expectoration.

Spasmodic Dyspnœa produced by Mental Agitation.—Mrs. S., aged fifty-six, three or four different times in the course of her life, from sixteen years of age, suffered fits of violent dyspnœa, continuing for several days, without cough. Jan. 1810, she had an attack of peritonæal inflammation, and with diarrhœa. The affection of the abdomen was nearly gone ; when I one day was in her room, under circumstances, in which my presence produced some sudden perturbation of mind. She was immediately seized with a violent fit of dyspnœa of an alarming kind, with irregularity of the action of the heart, both of which continued many days, so as to require her to remain in the erect posture, and did not end till after eight or nine days, with considerable mucous expectoration.

Progress of Asthma, Cure, and Reflections.—1809. P., an opulent gardener, aged about thirty, well in flesh, and of rather strong make, temperate in living, enjoying excellent health, and particularly indisposed to catch cold in the severest and most intemperate weather, has for seven years past, about the middle of May, on the first coming on of hot weather, been affected with the following symp-

toms: *First*, for about a fortnight he feels a tightness and fulness in his nose, which is stuffed so that he can scarcely breathe through it, and he sneezes very much, having all the symptoms of a violent catarrh. The complaint then leaves the nose, and his eyes become red, sore, and watery. After a few days he begins to feel great tightness in his chest, accompanied with wheezing, dry cough, not frequent or violent, and for the most part an inability to lie down in bed. This last state generally continues more or less for three or four weeks, when it goes off without any or with very little expectoration. This was the progress of his complaint one or two years that I attended him. Bleeding took away the affection of the eyes, and somewhat relieved, but did not cure, the difficulty of breathing. The pulse was rather quick and full. On the 7th day of such an attack in the chest I saw him. He had great wheezing and oppression, and could not lie down in bed. Bowels open. No flatulency. Pulse 80 and full.

No expectoration, and little cough.

He was bled ad ζ ix. The blood had very little appearance of inflammation, and he had some slight relief. He took for two days Kali Carb. efferv. cum Scillâ recente; but was very little better, when on the third day I gave him the following Mixture: Kali Super-carb. ζ ij. Rhub. \mathfrak{z} j. Contrit. adde aquæ font. \mathfrak{z} vj. Sumt. coch. tria ampla primo mane et merid. This medicine produced two gentle motions. That night he was able to lie down in his bed; and got immediately well without any continuance of the same

medicine, not being obliged again to sit up. Pulse next day 84. Tongue clean.

In this case, the complaint seemed without doubt to be cured by the medicine. And yet the patient had no dyspepsia, nor the common feel of sinking, weight, or oppression, about the stomach, which usually accompany these paroxysms. In such cases also the appetite is usually very great, and fits are evidently brought on, in persons not dyspeptic, by over-distention of the stomach, or by exercise on a full stomach. Neither in P.'s case could it be from the purgative effect of the Rhubarb; for his bowels were open on the two preceding days, and on the day before them he had been well purged by an aperient, all without relief. Could the effect have been produced by the Kali? It is worth while to try this in other cases.

I had an affection of lungs produced by disorder of the stomach; and in my eldest son an attack began with catarrh, and continued, as in P., for several days; and was immediately, and not till then, relieved by animal food and wine. But then in both cases there was evident dyspepsia.

June 24, 1810. Mr. P., now the 8th time, at the same season of the year, is affected in the following way. About ten days ago he was seized with a soreness of eyes, and watering, stuffing of the nose, tightness of nostrils, sneezing, and loss of taste, with little discharge from the nostrils, but great pain at times across the forehead; but without fever; by degrees the complaint went to his chest, producing

sense of tightness there, and pain in the epigastrium (apparently in diaphragm,) cough not frequent, which is chiefly in the night, and dry, and great dyspnœa with wheezing, so that last night he could not lie down in bed. Pulse 88, and full. Was blooded ten days ago; and has taken three bottles of the mixture ordered last year, without relief. Appetite bad. Tongue clean. Urine clear. Two or three motions daily. Calomel. gr. iij. h. s. Potass. Carb. ʒss. Rhub. ʒj. cras mane in haustu.

June 25. Two motions. Could not lie down last night; but his breath is much better to-day than yesterday. His breath is worst from nine to twelve at night. Has expectorated a good deal to-day. Appetite better. Pulse 84, and less full. Calomel. gr. iv. h. s. Haustus ut antea.

June 26. A motion after my visit, and four to-day. A very bad night with his breath, which would not admit of his lying down, and he has coughed and expectorated a great deal, but almost wholly in the night. Great wheezing to-day. Pulse 72, and full. Skin cool. Weather cooler to-day. Had some fever last night. Mist. e Potass. cum Scill. ʒss. 4^{ta} q. h.

June 27. The cough was so troublesome during the night that he could not lie down; the horizontal posture producing the cough, which affects him little or scarcely any while up. Breath much better to-day, with much less feeling of tightness across the pit of the stomach. Two motions to-day, and one after the report yesterday. No fever in night. Tongue clean. Pulse 66, and soft. Skin cool.—Pergat.

June 29. Has gone on regularly with the mixture. Coughs and spits very much in the night, and finds his breath during the fits so affected that he cannot lie down. Bowels open. Pulse 68, and hard. Urine high-coloured. Vs. ad ℥viii (in three teacups.) Pergat.

July 1. The bleeding immediately took the feeling of weight from the epigastrium, and diminished the wheezing and cough; so that he had very little of either last night. Blood not at all inflamed, and rather tender in texture. Pulse 84, full and strong. Three or four motions daily. Let him eat a little mutton boiled to-morrow.—Pergat in usu Misturæ.

1811. The attack this year came on with sneezing and other symptoms of catarrh about the 25th of May; but the affections of the chest did not begin till the 8th of June. He was blooded and took an emetic; which seemed for the time to relieve him; but the orthopnœa increased about the 12th, and was not relieved by an emetic on the 13th. On the 14th, he took at night half a grain of opium, and effervescing mixture with squill; slept five or six hours, though without venturing to go to bed. Pulse throughout natural, and bowels open.

He continued to be obliged to sit up for ten nights; and having tried to lie down for two intermediate ones, had great increase of cough and dyspnœa, with copious expectoration. Great relief was obtained by effervescing saline mixture with squill every four hours, and from half a grain to a grain of opium at night; and he was perfectly well on the 24th of June; the

complaint having been in all respects much slighter than usual.

Catarrhal Asthma.—Mr. P. P., aged about sixty, from twelve years old had every June a Catarrh, which sometimes went downwards to the bronchia and produced Spasmodic Asthma. It often lasted from two to three weeks. His mother and others of his family were similarly affected. [1815.]

Asthma from various Effluvia, Ipecacuanha, &c.—Mrs. G. aged about fifty, was sent by her mistress for a medicine to an apothecary's shop, in which they were pounding Ipecacuanha. She was immediately seized with a burning heat and pain from the throat down into the lungs, producing a violent irritation to cough, and an almost intolerable sense of suffocation. Some sickness came on, which she relieved by vomiting excited by warm water. This at the same time diminished the difficulty of breathing; but symptoms like those of a violent catarrh continued, and were not wholly removed for a full fortnight afterwards.

Mr. P. not only always found his asthmatic paroxysm aggravated in the summer, by standing in a hay field, merely looking at the haymakers making the hay-rick, but has often found difficulty of breathing produced in the winter when he has stood near old hay putting into a hay-loft from off a cart.

Lady Isabella K. and Mrs. P.'s little girl always get asthmatic fits from the effluvia of new mown hay; and the latter from no other cause. Lady C. always from the smoke of sealing wax.

Master W. P., aged five months, whose mother

was habitually affected with fits of spasmodic asthma very severe, had himself a fit Jan. 22, 1810, in which the pulse was only 116, respiration 52, and no heat, but wheezing with heaving of the chest and shoulders during inspiration. An emetic relieved the difficult breathing, and the next day there was a common cough and with loose expectoration.

Asthma removed by Fright.—Sir James G., aged fifty, from seven years of age had frequent and violent fits of spasmodic asthma, accompanied with fever, usually lasting for a week, and followed by a very slight expectoration of transparent greyish mucus, occasionally streaked with blood. These attacks sometimes amounted to pneumonic inflammation, and then required for their relief very copious bleeding. In the beginning of one attack which occurred some years ago, he was taking some æther, which accidentally fell on his arms, and caught fire from the flame of a candle. This produced a sudden and great degree of mental agitation, which immediately removed the paroxysm of asthma.

Asthma cured by a Cannon Ball.—Major-Gen. P. has been always subject to asthma, and cannot live in London on that account. In the year 1776, he went to India, and during the monsoon, from the middle of October to the middle of December, used always to be obliged to sit up in bed for about an hour, sometimes from twelve till three in the morning, with straightness of the chest, which went off with some spitting. He continued in this way till 1781, when, Nov. 19, he received a shot from the French at the

siege of Arcott, which fractured the os humeri and obliged him to have it amputated. He lost a great deal of blood, and it was six weeks before the parts healed. For many years afterwards he had scarcely any asthma.

Connection between Respiration and the Action of the Heart, and its known or suspected Relations.—

The proportion of the former to the latter, at rest and in a state of health, in the adult, is as 1 to 4. In diseases of the thorax of the inflammatory or compressing kind, and also about the abdomen, inspiration being painful or difficult, and the systole of the heart as strong or stronger than natural, the patient is obliged to make more inspirations, in order to compensate the want of depth, and therefore the respiration is quicker proportionably to the pulse.

On this subject the following important queries suggest themselves.

1st. Whether the same proportion holds good at all ages, during health and rest ?

2dly. Whether it holds good in health, during muscular exertion or at rest ; whether during sleep ; whether in all postures ?

3dly. The exact relation in every different disease, as well as in those first mentioned ? Particularly observe the following circumstances.

The pulse is increased in quickness by mental agitation, and therefore is quickened when one first feels it. Sometimes in typhus, where there is no delirium, this goes to a very great extent, so as not,

in young females, to allow one to judge of its actual state during the course of a common visit. Now if from mental agitation a quickened pulse does not produce a proportionably quick respiration, and if in typhus the same proportion between respiration and the quickness of pulse takes place as in health, then it will follow that in typhus we shall be able to see how much is owing to mental agitation, and how much to the real disease, by considering the latter as ascertained by the number of respirations multiplied by four.

Relation between Respiration and Pulse.—Mr. Hunter observes, (On Blood, page 61,) what is certainly true, that in natural deaths the respiration continues after the action of the heart has ceased. The contrary, however, sometimes happens. In Mrs. P., the heart continued to beat, so as to be discoverable by the pulse, at least ten minutes after respiration had ceased. [1808.]

Mrs. H., aged about fifty, was taken ill with pulmonary affection this day three weeks. Has now great wheezing with spasmodic inspiration. Pulse 96, and regular, and soft. Respiration 64, not from the diaphragm, which is not depressed during inspiration, but is so during expiration, so, at least, that the abdomen is pushed outwards; an effect, however, not arising from the diaphragm. She died two days after.

March 4, 1814. In Mrs. N., aged about 48, on the 6th day of stoppage in the bowels, with tense belly and evident marks of peritoneal inflammation, though

with the capacity of lying on either side, the pulse was 104, and full, and the respiration 32.

Miss W., at a very advanced period of pulmonic complaint, in which the expectoration was purulent and dark, and, though copious, very difficult to eject, lay on two pillows only, had a pulse of not more than 96, and at the same time breathed only 24 times in a minute without wheezing.

State of Pulse relative to Respiration.—Mrs. R. in general *cancer* of the mammæ and contiguous parts many days before death. Pulse 120, and hard. Respiration 20, with no perceptible dyspnœa.

In *ascites*, evidently arising from peritoneal inflammation, Master U.'s pulse was 112, and his respiration 40. He had no cough or any thoracic affection.

Master J. asleep. *Scrofula* in neck, with great drowsiness, and long stertorous respiration, especially during sleep. Pulse 100. Respiration 20.

Ditto, suddenly waked. Pulse 120. Respiration 20.

Master U., aged nine, at a very advanced stage of *abdominal visceral disease*; when lying down, pulse 120, respiration 30, from the intercostals and other muscles of the thorax only, but not scapular.

Feb. 5. Master D., aged four, after the *hooping cough* six weeks, slight; symptomatic probably of the epidemic of the season. Respiration 52. Pulse 132.

April 17, 1813. During most painful *faintness* from bleeding, my pulse was 80 in a minute and regular, my respiration only 7, and from the diaphragm.

Master L., aged two and half. Pulse 88. Respiration 20.

Master P., aged nine months (supposed incipient *hydrocephalus*.) Pulse 108. Respiration 30. He recovered.

In Master John W., aged twelve, who had suffered a month's *peripneumony* after two months hooping cough, the pulse was 190, and very full and strong. Respiration 108, grunting and irregular. He died.

In Mrs. L., a fat woman about fifty, with no particular complaint, or at least none in the chest, the pulse was 60, and respiration 24 in a minute.

Quere : Does not fatness make respiration quicker ?

Liver Disease.—May 13, 1809. Mrs. P., dangerously ill; cough troublesome; no pain about the liver; takes a deep breath without pain, but seems always anhelous. R. 36, Pulse 138.

Inflammation of Liver, with probable abscess and hectic :

May 14, 1809, Mrs. P., R. 36, P. 134.

— 17, ————— R. 32, P. 160.

— 18, ————— R. 36, P. 164.

— 19, Moribunda, R. 42, P. 160.

Pulmonary Consumption.—Oct. 10, 1808. Mr. P., R. 44, P. 136. Died 18th.

Phthisis.—Mr. W., R. 32, P. 108.

Glandular Hectic.—June 26. Miss E. S., R. 36, Pulse 130.

June 28. R. 28, Pulse 112.

July 5. R. 32, P. 132. Died.

Peripneumony.—Mr. H., Jan. 6, 1809, Moribundus. R. 60, P. 158.

Peripneumony.—March 1, 1805. Miss C. Ch., a child, R. 66, P. 148. Died next day.

Ditto, or rather Vomica.—March 2, 1808. Mr. W., R. 44, P. 96. Died a few days after.

Vomica.—Mr. E. W., R. 48, P. 144. Recovered.

Pleuritis.—Mrs. W., Jan. 8, 1809. Moribunda. R. 44, P. 124.

Pleurisy.—Mr. W., Oct. 19, 1808. R. 44, P. 84. Recovered.

Pleurisy.—Master T. Lying on right side, the pain being on the left. R. 32, P. 96.

Mr. S., 1805, Dec. 22, A. M. R. 54, P. 128. P. M. R. 52, P. 120.

Dec. 23, P. M. R. 60, P. 118. Died.

Pneumonic Inflammation, with Hæmoptoe.—Miss F. Sweating. No wheezing or delirium. Moribunda. R. 52, P. 124. Dec. 30, 1809.

Complaint of Lungs.—May 1, 1809. Miss A., E., R. 90, P. 120. Again, R. 106, P. 144. Died a few hours after.

Asthma.—Mr. C. No cough. R. 32, P. 112.

Nervous Dyspnæa.—June 7, 1809. Miss M., R. 34, P. 88.

Hydrothorax.—Sept. 25, 1808. Lord G., R. 32, P. 84.—Dec. 27. R. 28, P. 96.

Diseased Heart.—Dec. 10, 1808. Mrs. H. R., 44, P. 90, and very irregular.

Dec. 12. R. 36, P. 96. Died 15th.

Diseased Heart.—Mr. B., Nov. 5, 1808, R. 36, P. 68, very irregular and weak.

Hydrocephalus internus.—Jan. 11, 1809. Miss T., aged ten, R. 36, P. 48.

Hydrocephalus internus.—Frequent convulsions, with globus hystericus. May 26, 1809. Master T., aged one year and a half, R. 66, and irregular, P. 176.—May 27. R. 16, but very irregular; after a deep sigh, ten seconds sometimes without an inspiration. Pulse 168, and irregular. Died.

Aneurysm.—June 19. Mr. St. R. 36, P. 120.

Disease of Brain.—Feb. 22, 1806. Mr. W., R. 72, P. 144. Died six hours afterwards.

Typhus.—Fourteenth day. Miss K., Oct. 8, 10, 1808. No cough. R. 46, P. 126. Subsultus tendinum. Died.

Theory of Coughing.—Coughing is not merely a sudden and violent emission of the breath. The process seems to be as follows. The lungs being inflated, usually beyond the common degree, the larynx is drawn downwards, the rima glottidis closed, and the epiglottis depressed, so as to close the aperture so firmly as not to be forced up by the common cause of expiration, which is merely the relaxation of the diaphragm and intercostal muscles, aided by the mechanical power of gravitation on the ribs. Now, however, the assistance of another power is necessary, which is that of the abdominal muscles, which contracting, suddenly and with violence, forcibly compress the lungs and arytenoid muscles, and overcome the resistance made by the epiglottis. The air therefore rushing out with a sudden impulse, produces

against the firm sides of the tube that sound which is called a cough.

In some cases this effort is wholly voluntary; in some wholly involuntary; and in others of a mixed nature.

The final cause or end of coughing is evidently to expel what incommodes the trachea or bronchia. This is the case with regard to all noxious substances which get into the air vessels, as even certain vapours. So also mucus, pus, blood, &c. The same effect is produced by certain changes in the mucous membrane itself, or even parts external to it, when through them there is compression of the bronchia, as water in the chest, enlargement of the heart, inflammation of the pleuræ (or substance of the lungs), pressure from enlargement of the liver, &c. &c.

In the hooping cough it seems as if the membrane lining the inside of the trachea, and upper part of the bronchia, was in an unduly irritable state, probably from fulness of the vessels, though not amounting to inflammation; in consequence of which the expulsive effort takes place in a very quick and long-continued succession. Hence arise violent fits of coughing, continued so long that the patient is scarcely able to inspire; and when he does so, the epiglottis being forcibly kept down, and the rima glottidis closed, difficultly open in a sufficient degree to admit of any inhalation of air, which therefore enters with the well-known hooping sound through the narrow and rigid aperture in the glottis.

In this case the noise of hooping or croaking arises

from the temporary contraction of the parts occasioned by the stimulus of a long fit of coughing ; and in this respect, which argues only a difference in degree, it differs from the cynanche trachealis or croup, in which the contraction arising from inflammation and permanent thickening of the parts, nearly the same sound occurs both in expiration and inspiration, when not preceded by coughing, and the sound of the cough itself is as though the noise were emitted through a metallic tube.

In the advanced stage of peripneumony, measles, &c. when fatal, the patients cease to cough as the difficulty of breathing increases ; because they cannot inspire sufficiently deep.

Theory of Coughing, &c. continued.—In coughing one inspires as deeply as one can, and then strains all the muscles of the abdomen in order to press up the viscera and the diaphragm ; and to draw down the ribs, so as forcibly to expel the air from the lungs. That is the reason why the flanks of a broken-winded horse are drawn in, in expiration, or even while the breath is retained in inspiration, and coughing or roaring take place, from the depression of the epiglottis or closing the rima glottidis.

In nervous coughs (Miss M. this day, June 6, 1809) the muscles employed in inspiration seem not able to perform their office ; probably from the rigid shutting of the rima glottidis and epiglottis not leaving a sufficient space for the admission of air, whereas in inspiration the air is received with wheezing, and the finger placed on the outside perceives a tremulous

motion in it, and the muscles of inspiration are greatly fatigued by the violence of the effort, and suffer pain; and in expiration there is the same wheezing, and a sudden and convulsive exertion to get rid of the air retained as long as possible, not for the purpose of expectorating, but merely in order to drive up the rigidly contracted epiglottis, and open the closed rima, which quickly return to their former position. Hence the cough occurs in quick and rapid and violent "kinks" or shocks.

It appears, then, that, in Miss M. at least, the nervous dyspnœa and cough are the consequences of an affection of the larynx, owing to the spasmodic closing of the aperture of the glottis.

As in her a deep inspiration can be made, it is obvious that the difficulty is only in the passage, or larynx, where the tremor in inspiration is felt by the hand externally; where also a kind of clicking noise is frequently heard from the rising up of the glottis, and perhaps shutting down of the epiglottis, and the same rising and falling of the glottis may be externally perceived. When the obstruction to breathing is in the lungs themselves, one may often perceive it by a tremulous motion felt by putting the hand on the corresponding part on the outside of the thorax.

Another evidence presumptive, but not certain, that the larynx in Miss M. is the seat of the disease, is her not being able to speak out of a whisper. R. 34, P. 88.

Now quere, whether, as it is certain that in broken-winded horses the upper part of the larynx is in a

state of chronic inflammation, certainly in my horse, and probably in all other cases, since jockies finding that broken-winded horses cough by pressure on that part, employ that method as a criterion between them and sound ones; quere, I say, whether broken wind is any thing else than a spasmodic depression of the epiglottis, or rising of the glottis, and contraction of the air passage of the larynx, as in Miss M.? One can easily see how exercise, which produces a quick irritation on the glottis, should increase the symptoms. Spasmodic asthma is certainly a pressure on the bronchial vessels themselves.

Liver Cough.—May 8, 1809. In Mrs. P. it came on only with the fits of aggravation in the symptomatic fever, and disappeared when that was reduced. It continued with fever, the pulse being up to 144 and 152, when all pain, and nearly all soreness on pressure of the affected side, were gone; the liver, however, being at the same time greatly swelled, and there being *difficilis decubitus* on the opposite side from weight falling over, and a sense of throbbing and palpitation, which to the patient's feelings subsided when she returned to the back or right side, though great pulsation of the aorta was still felt to the touch. The skin was always yellow, though not in an accumulating degree, and no bile ever appeared to pass by the bowels. The head was clear, and there was never any pain of the shoulder. Pressure about the right side of the epigastrium produced some soreness, and always an immediate cough. The cough was accompanied with considerable expectoration of thick

mucus, sometimes slightly tinged with blood, which was difficultly raised.

She died May 20th, about half-past eleven o'clock A. M. For two or three days there had been some wandering of mind; but never any shivering, pain in the shoulder, night exacerbation, or peculiar night sweating; though for about ten or twelve days previously to dissolution, the weather being very hot, there had been constantly some degree of sweating night and day.

Case of Cough and Dissection.—Miss W., aged about 50, tall and thin, and who had for many months laboured under cough, accompanied with febrile heat, quickness of pulse, extreme tightness across the breast much aggravated by fits, so as to make respiration very short and laborious, with an expectoration of a purulent appearance, and great emaciation, died on the 11th of March, 1813, and was opened the same night in my presence by Mr. G. Norman.

The lungs adhered firmly all around to the costal pleura, which appeared preternaturally red. Their substance abounded with hard knots of various sizes, all of which when opened appeared to be whitish, opaque, firm membranous cysts containing pus. This was more especially the case in the left lobe, the parenchyma of which seemed entirely disorganized by the abundance of these cysts, some of which were visible on the surface, coalescing as it were with the pleura. There was no appearance of schirrhous glands in the lungs, nor any extravasation of fluid in the cavity of the thorax.

The heart was very small, but had all its valves in the natural state. The aorta was very capacious proportionably to the size of the heart. In the pericardium there was somewhat more than the usual quantity of fluid.

The abdominal viscera were all free from disease, except the uterus, which extended high up in the pelvis, and was of a pyriform shape, being in its vertical diameter five inches in length, and its transverse diameter four inches. It formed a fleshy mass, having small ossifications in various parts; and, towards the cervix, an irregular concretion of a similar kind, and of a larger size. Its cavity was of the usual appearance.

The rectum and anus abounded with hæmorrhoidal swellings full of black blood.

Hymenis integerrimi, infra et é lateribus, quasi processus falciformis, vaginæ orificium coarctantis, exemplum speciosissimum præbebat hoc cadaver.

Case.—Miss M. M., aged about twenty, moderately tall, sufficiently fat, and of a fine form, long subject to depression of spirits, with pain, weight, and other affections of the head, was greatly relieved, and nearly cured of these complaints, by perseverance in low diet, evacuation, and exercise, when she was seized with a cough, accompanied with very considerable fever. Her breath was not much affected, and she had no pain about the thorax. Her cough in the day was dry, but in the morning accompanied with tolerably free expectoration, in a moderate quantity, of a greyish yellow fluid which

wholly sank in water, and was occasionally tinged with blood in streaks or spots. These symptoms were not preceded by any catarrhal affection. Her blood when drawn from the arm was considerably inflamed and cupped. She recovered, notwithstanding all these unfavourable symptoms, which continued for some weeks.

Cough often producing Sickness.—In Miss S., constant catarrhal cough produced incessant sickness and vomiting, which were immediately relieved by an opiate preventing the tickling cough.

Effect of elongated Uvula in producing Cough.—In Miss P., Feb. 13, 1809, as well as in myself at various times, a very much elongated uvula produces a dry hollow cough, by irritating the upper part of the wind-pipe. In such coughs, the uvula should always be examined.

Cough from elongated Uvula.—There is a cough either dry, or accompanied with very little expectoration, and that of thin mucus, which scarcely relieves a tickling and irritation about the upper part of the trachea, occurring two or three times together, each time going off suddenly, not affected by any posture, though sometimes accompanied with pain, stiffness or soreness about the throat, which on examination will be found owing to the elongation of the uvula, which hangs down on the root of the tongue, and is often very teasing and troublesome.

Hooping Cough.—June 25, 1808. Miss E. B., aged eleven, having a most violent dyspnœa and hooping cough with fever; pulse 146, sometimes in a

minute, and respiration from 60 to 70. She had grown worse sitting up, and under the use of Laudanum, mixed with Antimonial Wine. She was kept in bed, had saline effervescing mixture with Squill every two hours, a grain of James's Powder, and ditto of Hyoscyamus every four hours, was purged, and drank cold liquids, having been before without effect bled repeatedly with leeches, blistered without any, and vomited with no, evident benefit. She recovered. She expectorated a great deal very like purulency.

Her eldest sister had the hooping cough seventeen and a half years before, at 6 æt., with three brothers, violently, so as to bleed at the nose: yet had it now, hooping violently for three weeks, so as to be almost strangled, without expectoration, or any degree of fever.

One of their other sisters had it the first of the three. A brother had it three years ago; and Miss B. was with him constantly without catching the least symptom.



PULMONIC INFLAMMATION, &c.

Queres on Pneumonic Inflammation.—It is necessary to ascertain what are the symptoms of inflammation in parenchymatous parts, as the liver.

In the lungs I know of no mark except fulness of the vessels, and obliteration of the bronchial cells. Here it must be inquired whether that obliteration is by pressure or effusion into them of the common contents of the blood vessels, or any part thereof, as serum or lymph, or either, mixed with red globules; or whether, in such a case, there is mucus or pus in them.

I am inclined to suspect two cases of idiopathic disease in the lungs, both originating in membranous parts: 1st. Pleurisy, in the pleura itself; and, 2dly, Bronchitis, in the membrane lining the bronchial cells. The latter seems to exist in different stages in croup, measles, whooping cough, catarrhus senilis, certain states of asthma and common catarrh; and in different degrees produces dry cough, common coryza, mucus, blood, coagulated lymph, pus.

In the pleura, serum, lymph, pus. In both cases one may suppose that inflammation may run into the substance of the lungs; but it may be doubted whether in the cases of full vessels without bronchitis, or even of bronchitis itself, the fulness of the parenchyma may not arise from the mere incapacity of deep inspiration, and therefore of propulsion of the blood out of the pulmonary veins, conformably to what Haller formerly, and very recently Mr. Astley Cooper, observed of the effect of expiration to fill the right auricle, venæ cavæ, and jugulars.

Symptoms of Pleurisy.—Miss T. Is it any mark of distinction in pleurisy from peripneumony, that in the former the patient is able to lie down without inconvenience in the horizontal posture? It seemed so in Sir M. S., Mrs. C., and others; in whom there was little cough, and still less expectoration, of transparent mucus slightly suffused with blood, and no wheezing as from fluid in the bronchia; and in whom the disease went off without any change, and with constant diminution of the expectoration.

It often happens that pleuritic inflammation is mistaken for hepatitis; as, in the case of Lord H., it was for an affection of the kidney. This is easily explained, from the extent to which the pleural cavity reaches, and the communication of pain and soreness along the muscles, even below the diaphragm.

In cases of peripneumony, asthma, and other diseases of the lungs themselves, the patient employs many secondary muscles to raise the ribs in order to

inflate the lungs, which do not suffer much or perhaps any pain from that inflation.

Accordingly we find in the majority of cases of phthisis from inflamed and even suppurated tubercle, and in some cases of vomica, that the patient will inflate the lungs by a tolerably deep inspiration without much or sometimes any apparent difficulty, and with a total denial of pain, and no excitement of coughing. On the other hand, in simple pleurisy, as I think in Miss T., May 19, 1809, the pain about the lower part of the pleura, and perhaps the pleural lining of the diaphragm itself, being very great, none of the accessory muscles are called into use, and the patient makes amends by frequency for want of depth. In the case just mentioned, on the evening of the 8th day, the respiration was 78 in a minute, and the pulse only 124; and there was little cough, no wheezing or hoarseness, or mark of much affection of the lungs; and the expectoration was small, slightly yellow and semi-transparent, and tinged now and then with blood; and there was no appearance as if any thing wanted to be expectorated, or any preternatural pressure of the bronchia. She lay down as easily as she sat up. During bleeding ad 3xij that night, for the fourth time, the respiration came down to 66, and next morning was at 56, pulse 120, expectoration more easy, and pain less.

20th. At night, pulse as before, and respiration very quick, with no difficulty of expectoration, which was of light yellowish colour, and partly transparent,

without blood, but in small quantity. Can lie on the left side. Urine high coloured and small in quantity. One or two bilious loose stools. Was bled to-day at three, ad ζ iv; blood with a moderate crust of tough, cupped coagulable lymph. Cruor not easily diffusible in serum, which was of a greenish yellow colour. Has taken during the day two or three draughts of Kali efferv. with Scill. recent. gr. vi. in sing. Is easily flurried, and has at times a sort of convulsive catching in inspiration about the thorax, but does not use her shoulders, &c. A blister put on last night has not risen.

Under these circumstances, trusting that the difficulty and quickness of respiration arose rather from pain in the ribs, or dread of elevating them, as in the case of Sir M. S., than from actual disease in the lungs themselves, I obtained Dr. Crawford's concurrence (with whom I was called in to consult) to try ten drops of Laudanum, and to go on with the Scill. gr. vi. in efferv. draught 4^{ta} quâque horâ as before.

May 21. Pulse and breath much as before. Says she is better. Has had a little sleep. Has coughed now and then, and expectorated more easily some mucus of a lightish yellow colour, without air globules in it. Continues to lie on her back, with her head low. Her pulse is regular and strong, and her heart, to the touch, beats as usual with such a pulse, and she says she has no pain there. Hands and feet warm, but not much beyond the natural degree. Tongue with a slight yellowish fur. Urine rather higher coloured than natural, without cloud or sedi-

ment, but small in quantity. No sickness. Two or three motions, loose, and of dark brown colour. Pergat. At night much the same in every respect. Countenance all along, since I have seen her, somewhat livid. Haust. u. a. cum Syr. P. a 3j. in sing. Empl. Canth. femoribus intern. prope genua.

22. Pulsè 122, regular, full, and strong. Breathing about 60. Two or three stools as before. Urine of a brightish yellow colour. Expectoration in a moderate quantity, that is, eight or ten spits coming up easily with each cough, and of a somewhat greener colour, but still without any air bubbles. Appears to labour much for breath on any motion, even into the erect posture. Says, however, that she is better. Has never been delirious. Has found great difficulty in swallowing cold drink, but has always taken her draughts readily. Has slept very little. Ammoniae præp. gr. iv. Myrrh. gr. vj. Lact. Amygd 3x. 4^{ti}s.

8 P. M. Pulse 126, regular, more full and strong. Skin somewhat more hot. Has taken three draughts. One or two motions, and expectoration and urine as before. Still says she is tolerably well ; but evidently falters in her breath, in answering questions, more than she did. Denies having any pain about the chest except in the right side, where she complained before, and to which the blister was applied ; and on touching the blister it appears that her present complaint of pain in that part on coughing arises from the blister itself. She cannot bear sitting up ; is almost suffocated when she turns to the right side, and lies less well on

her left than on her back. Respiration 56. No palpitation of the heart. No incoherency.

At half-past ten died very suddenly, having previously suffered great palpitation of heart.

During my attendance, had no irregularity or weakness of pulse, which varied from 120 to 126; no faintness; and no pain any where except about the right epigastrium or rather hypochondrium.

May 29, 1809. 3 P. M. *Dissection* of Miss T. No change produced by putrefaction. The lungs appeared externally perfectly sound. There was no appearance of disease in the pleura, except a portion of that which covered the pericardium; and of which the whole corresponding with the posterior part of the heart was much redder than natural as from recent inflammation. To this part a very small bit of the pleuritic covering of the lungs inseparably adhered; but it did not appear that the inflammation extended into the substance of the lungs themselves. These, in their most depending part, were of a dark red colour; but evidently from the subsidence of the blood by gravitation after death; and when a piece of the darkest was thrown into water, it was perfectly buoyant. No disease whatever appeared in the substance of the lungs. In the left cavity of the thorax there were about three ounces and a half, and in the right about four ounces, of serous fluid of the usual yellowish colour.

The pericardium was every where very much thickened; adhering by the greatest part of its internal surface to that of the heart, by the intervention of

a very thick crust of firm coagulated lymph, opake, and of a whitish yellow colour. The pericardium could not be separated from the heart without the assistance of the knife. In that part of it which was immediately within the red portion of the pleura before mentioned, the pericardium throughout its substance was of the same red colour; as was also a considerable part of the external surface of the posterior or left ventricle corresponding to it. In this space, also, the crust of coagulable lymph, both on the inside of the pericardium, and outside of the part, was considerably thinner than in most other parts, and the adhesion consequently less firm, as from more recent inflammation. The redness nowhere entered into the substance of the heart itself, but was confined to its outer coat, which when cut into exhibited a red line under the coagulated lymph. There were in the pericardium about seven ounces and a half of yellowish transparent serous fluid, in which floated a few small portions of a thicker substance of the same colour, like half dissolved jelly.

The diaphragm was free from all appearance of disease.

The liver was larger than natural; but no otherwise deviated from the healthy condition either within or without, except in having on the convex surface of the great lobe, a small patch more red than the rest, but without adhesion or any marks of extravasation.

The other abdominal viscera were not examined.

The heart itself was of a rather smaller size, thin, and very pale and flaccid. Each of its cavities con-

tained small concretions, chiefly of coagulated lymph. The valves and internal surfaces were all in a healthy state.

Reflections on the case of Miss T.—She coughed little, and in short but brisk fits. In the beginning she expectorated a moderate quantity, as $\frac{3}{4}$ iss per diem, without difficulty. When I saw her, much less, certainly not six drachms in twenty-four hours, with considerable ease, not frothy as from air passing up and down the fluid retained in the bronchia, and of a yellowish or greyish green colour, evidently changed mucus; once or twice only slightly tinged with blood. There was no wheezing, and no labouring to bring up phlegm, or relief from bringing it up. No hoarseness. The breathing was uncommonly quick and shallow, and no auxiliary muscles, as of the shoulders or neck, were called into use, as usually occurs where persons have the bronchial cells obstructed by any thing within them, or immediately pressing round and near them.

After the fourth day, on being repeatedly asked whether she had any pain in the chest, she mentioned that she had; indicating its position by drawing her fingers across the sternum from the left to the right breast.

She had, however, from that period great difficulty of breathing. A day or two before I saw her on the nineteenth, the only pain which she acknowledged to Dr. Crawford was in the epigastrium and below the cartilages of the ribs on the right side, and she shrunk from pressure on that part. To the same part she

also referred me, when I inquired where she suffered pain ; but she absolutely denied having any pain in the breast or about the heart, though I twice put my hand on that part, which I found free from palpitation, and expressly inquired if she had any pain or uneasiness there. On being urged to make a deep inspiration, she appeared unable to do it. Movement appeared to distress her very much. At two different times I had her lifted up in bed and supported by a pillow, but she knit her brows and seemed uneasy, so that she was immediately allowed to lie down again. When she lay on her left side, she bore it tolerably well, but her breath became perceptibly harder, and she was otherwise more uneasy when she was turned on her right side. The posture which she preferred was on her back, with her head as low as usual, that is, supported by a single pillow and bolster. Notwithstanding this, on the ———— she got up once or twice to make water, without appearing to the attendants to be particularly distressed by it.

A symptom observable in Pleurisy, respecting Dyspnœa.—In Sir M. S., who had very little cough on the seventh and eighth day, and did not expectorate above three or four times a day thick mucus suffused very slightly with blood, could at that period lie on either side, though at the beginning the pain was rather acute in the right side among the ribs, but was then pretty far forwards and obscure ; with a pulse from 96 to 108 in a minute, and soft ; with little heat, rather a moist skin ; and purging from Saline and Antimonial Medicines with Squills ; high-coloured,

deficient, and rather turbid, but not depositing, urine; and the blood with a tough crust of coagulable lymph, nearly one-third of the whole mass not cupped, with coagulum difficultly diffusible; the inspiration was short and laborious, and as it were convulsive, being 36, when the pulse was 96. The labour in breathing was very much increased during sleep, being convulsive, and accompanied with a groaning during expiration like a roaring horse. This symptom continued, with incapacity of coughing, and for one or more days after all pain was gone, and he could lie on both sides, and no feeling of indisposition remained about the thorax, except "that," as he said, "of weakness," by which he was incapable of distending the chest sufficiently to cough out.

In cases of gout, sciatica, &c., where persons cease to have any pain except a slight one on motion, sufficient, however, to prevent the disposition to act, though I am persuaded that it by no means lessens the actual ability, they are apt to say that the part is weak. This was probably the state of Sir M. S., as before described, and produced a laborious respiration, that is, a disposition to act by any other muscles except the intercostal, to retain the breath by shutting the aperture of the glottis, and to feel about the chest that sensation which rendered him indisposed to exert the intercostals themselves, which he called weakness. Any man who has ever felt a rheumatic pain under the scapulæ, with an accidental cold, will see how it seems utterly to take away the power of coughing, and that of inspiring deeply enough to relieve

by expectoration the sense of suffocation from mucus in the bronchia or about the larynx. That there was little affection of the lungs themselves in Sir M. S. is probable, because the disease terminated almost without expectoration, which would scarcely have been the case if the substance of the lungs had been so affected, and because on the 9th day, while the dyspnœa continued, the pulse had become slower, the heat less, and the urine the following morning very copious and pale. Perhaps, however, this change in the urine happened from the use of considerable quantities of cold toast and water, which I at the beginning of that day allowed him, and which had before been denied him. The convulsive respiration, noise in expiration, and all pain and uneasiness about the thorax left him on the 11th day.

State of Blood in Pleurisy.—Mr. B., aged thirty, a hard drinker, on the 6th day of a pleurisy, with no great difficulty of breathing or pain, with a moderate pulse, had no other symptom indicating danger, except that out of four teacups of blood taken this day, two had blood of which the crust was thick and semi-transparent, covering cruor which was scarcely coherent, and from which it separated with a touch ; while the other two cups were firm, and covered with a thick, cupped, coherent crust. On the following day, bloody expectoration took place, with increased pain and difficulty of breathing, some degree of delirium at night, a dry tongue, and a respiration of 30 in a minute, while the pulse was only 64, regular but weak ; the face being flushed and hot, and the

urine pale. Early in the morning of the 24th he died.

[Nov. 22, 1812.]

Pulse and Skin in Pleurisy.—In Mrs. P., aged seventy, labouring under most acute pleurisy, on the second day, with considerable inflammation of the blood, which was extremely tough, the skin was cool, the feet uncomfortably cold, the tongue clean, and the pulse soft, and not exceeding 66 in a minute. She could hardly breathe at all.

Fatal Pleurisy.—Mr. M., aged forty-eight, having been wet through, and continued long without changing his clothes, was two days afterwards, on the 2d of December, 1811, seized with symptoms of pleurisy. He had a violent pain in the right side of the thorax, accompanied with great shortness of breath, but without cough, and with acute fever. On the 3d of Dec. he was twice freely bled, with considerable relief, and took aperient and diaphoretic medicines. On the 4th, he was somewhat better. On the 5th, the symptoms being aggravated with the addition of some delirium, he was largely bled at an early hour. The crassamentum was firm, and was covered with a thick crust of coagulated lymph, which, the blood having been taken away in a large bason, was not superficially concave. In the course of that day I saw him. He was free from pain in his side, and had no cough; but his pulse was 120 in a minute, and very strong and full, and his urine was very small in quantity, high coloured and turbid, but without sediment. His tongue was clean. He had no stool on that day, and complained that as soon as he closed

his eyes he was prevented from sleeping by a rapid succession of uncontrollable thoughts. He was ordered frequent effervescing draughts of Citrate of Potash with Squill, and fourteen ounces of blood were again taken from the arm. Some opening pills were also given. During the operation of bleeding, the pulse was reduced to 104, and finally settled at 108. During the night he had some sleep. His medicine operated thrice copiously, and when I saw him at half-past nine in the morning of the 6th, he said that though he had had some return of the pain in his side during the night, he was then in every respect better; that he had lain on his left side, but could not well lie on his right. He took a moderately deep breath without any expression of pain. He had coughed somewhat more than before, and had brought up a little grey mucus. He was however constantly hawking, and drawing mucus from his nose into his throat. His pulse was 112, and much softer than it had been, but still certainly too quick for the circumstances. His skin little hotter than natural, and his tongue clean and moist. The blood had flowed slowly down his arm, and had been received into five teacups; in the three first of which the crassamentum was covered with a rather thick semitransparent crust of coagulated lymph, which was not cupped, and extended all round to the circumference of the teacups. The crassamentum beneath had also little serum intervening between it and the cup; and when the lymph on the surface was raised with a large pin, it nearly separated itself from the cruor, which had scarcely any cohesion.

In the fourth and fifth cups, the coagulum was much more contracted and firm, and the lymphatic crust was thick, strong, and cupped. Mr. M. expressed a desire to get out of bed; in which I acquiesced, requesting that he would sit on a sofa, and immediately return to bed as soon as he should be fatigued. He reclined on the sofa half an hour, and being tired and tremulous, then returned to his bed. No sooner, however, had he lain down than he wished to get up again, was very restless, and occasionally sat up in bed. He also shewed some forgetfulness, by asking incoherent questions. He had taken his medicine, which was an effervescing draught, with one grain of dried Squill in a pill. About three o'clock, while he was attempting to take a second pill which was offered him, it was observed that he frequently aimed at it with his left hand ineffectually, and when he had received it, grasped it firmly, with seeming want of consciousness. Immediately somewhat of contraction was observed to take place on the left side of his face, and he became in a degree insensible. Mr. Spry, apothecary, and myself, not being readily met with, Dr. Gibbes was called, who was recognized by the patient. Dr. G. found him scarcely capable of speaking, but understanding all his questions, and able to move his left arm. I saw him at a quarter before four. Cupping glasses were then applying. He was sitting up, but very restless, attempting with both his hands to throw off the bed clothes in order to get out of bed. He was unable to articulate, but not wholly unconscious, as when I asked him to put

out his tongue he understood me, and ineffectually tried to open his mouth for that purpose. His pulse was 90 in a minute, full and bounding, that of the carotids extremely strong and full; and his respiration 56, short, scarcely stertorous, and chiefly performed by the intercostals, without the aid of the scapular muscles. The pupil of the right eye did not, on the approach of a candle, contract so much as that of the left. The cupping was carried as far as ten ounces, and leeches and blisters were applied. At nine o'clock every thing was much worse. The balls of his eyes were chiefly turned to the right side on which he lay; he sweated a good deal, and was wholly insensible. The left arm was quiet; but there was a constant tremulous motion of the right arm and hand. About ten he could not swallow. His eyes were open, and fixed in a forward direction, with tears flowing from the inner angles. At a quarter before eleven he died.

Appearances on opening the body of Mr. M., Dec. 8, 1811, at half-past eight P. M.

The body was become very offensive, and the cellular membrane was almost every where emphysematous. The dura mater was so firmly attached to the cranium on the upper and fore part, that it could not be separated; and in the attempt to do so, it gave way in other parts, and the whole encephalon became detached from the base of the skull. In the pia mater, all the veins were fuller of black blood than was natural, and the minute arteries were every injected with florid arterial blood. This was especially

the case on the lower part of the posterior lobe of the cerebrum on the left side, and also on the upper part of both lobes of the cerebellum, which was as it were marbled with scarlet patches. The pia mater was throughout preternaturally thick ; but was more especially so on the anterior part of both hemispheres, where it had lost its transparency, and was of a milky colour. The whole brain was unusually hard ; thin slices of it, cut horizontally through one hemisphere, being so firm as, when held up by one end, to shew no tendency to fall in pieces. On the surface of each slice florid blood oozed out in more than the natural quantity. All other parts of the encephalon, as the ventricles, &c. shewed no deviation from the common state, except that the pons varolii was much smaller and flatter than is usual.

In the thorax, the pleura on the right side was of a very dark red or purple colour, throughout the whole extent which lined the ribs and diaphragm, and forwards as far as the anterior angles of the ribs. From about the middle of its length, on the posterior part, there was attached to it a firm crust of coagulated lymph, of an eighth of an inch in thickness, which was continued even upon the pleural coat of the diaphragm. The pleura investing the posterior part of the right lung was of an unnaturally dark colour, but much less so than the pleura costalis, and was free from all exsudation of coagulated lymph. In the right cavity of the thorax there were four or five ounces of serous fluid tinged with blood, in which floated some crusts of lymph like those before

described. In the left side of the thorax, on the posterior part, the pleura costalis was also of a much darker colour than natural, but without lymphatic exsudation; and in the interval between the two pleuras there were found six ounces of serous fluid, much more deeply tinged with blood than on the right side. The lungs themselves, on both sides, appeared free from disease. The heart was large, flaccid and thin in its substance, fat, and containing in its cavities concretions of blood, separated into coagulated cruor and lymph. All the valves, together with the coronary vessels and pericardium, were in a natural state.

It must not be omitted, that the cranium in general was of a most extraordinary thickness, and especially the forepart of the os frontis, the external surface of which was for some space rough and full of indentures, and the substance so soft as to admit of being, with some difficulty, cut with a knife. This state, which did not penetrate through the cranium, or extend to any other part of it, was doubtless owing to a violent blow which he had received on the part from the fall of a scaffold, while he was in bed at Westminster school, when a boy of twelve years old. This blow had at the time much endangered his life, and had left a cicatrix on the skin, exactly corresponding with the part of the cranium above described.

The abdomen was not examined.

Pleurisy cured by Cold.—Miss M., about seventeen years of age, during very severe weather in the month of February, became affected with an acute pain

on the right side of the thorax, accompanied with cough and hurried respiration, much aggravated by lying on the pained side, slight expectoration of thin mucus usually streaked with florid blood, great heat of the skin, high coloured urine, and a pulse hard and at least 136 in a minute. She was several times bled, and had all the other remedies which are usually found most efficacious in general or pleuritic inflammation. From these measures the only benefit which she seemed to have derived, on the 5th or 6th day, was the reduction of the pulse to 120 beats in a minute, all other symptoms remaining exactly as before.

Under these circumstances, I determined for the present to abandon common remedies, and try what would be the effect of the mere abstraction of heat, and that by the most simple means. I therefore ordered a large glass of the coldest water that could be procured to be immediately brought, and made the patient drink as copious a draught of it as her stomach would bear. This was more than half a pint. In a few minutes the pulse was reduced eight beats in a minute. The liberal use of the water was continued through the night, and at my next visit on the following morning, the pulse was only 80, and every symptom of disease nearly gone.

Pleuritis, with Determination to the Head, fatal.
—Master G., aged three years and a quarter, on the 6th of May, 1809, was seized with drowsiness and oppression of the head, together with cold shivering succeeded by fever, in which his pulse reached 136 in a minute, and shortness of breath, unattended with

cough or inability to lie with his shoulders low. The febrile symptoms continued without any new local symptoms, but with a very dry skin, for four or five days; during which time his head was so heavy that he could not himself support it. He was leeches about the head, blistered behind the ears, and copiously purged. His bowels appeared to be much loaded, and he passed very dark coloured stools. After this time, the whole complaint seemed confined to his chest; the difficulty of breathing increased, with a frequent dry hacking cough, and in spite of various evacuations, his pulse rose to 160 in a minute.

I first saw him on the afternoon of the 23d. He had taken *Digitalis* in tincture and substance; of the former twenty-five drops daily, and of the latter half a grain every four hours; in consequence of which his pulse was reduced to 95 in a minute, with considerable irregularity. His respiration, however, was far the quickest I ever observed, amounting to 80 in a minute. He was free from delirium and drowsiness, could see perfectly well, and the pupils contracted well and equally.

The same plan of remedies was continued.

On the morning of the 24th, his pulse was 92, and irregular. His respiration, as he lay on his back, on which he always turned from his sides, was 72 and regular; on his right side 80, and grunting.* He had great palpitation of his heart; and some oppression as well as quickness of respiration, with a little

* This word is not very classical; but I know of no other to express a short catching sound in expiration.

expectoration. His countenance and arms were livid, and he passed his urine under him, but was free from all mental alienation.

Blisters and evacuants were employed, and the *Digitalis* continued.

In the evening, all symptoms were much as before. He lay best on his back, a little inclined to the left side. Pulse 92, and irregular. Respiration 80.

On the 25th in the morning, his pulse was 80, and his respiration 68. Other symptoms as before. In the evening, pulse 88, respiration 80, more laborious than before, with considerable heaving of the chest, but no assistance from the scapular muscles. He lay in the same posture as before, with some wheezing, which ceased for a while when he coughed up a little mucus. Urine still under him.

On May 26th, in the morning, he had been for ten minutes, for the first time, lying on his right side, and was dozing. His pulse was 88, hard, and somewhat irregular. His respiration 60, with some wheezing, and grunting at each expiration; and he assisted his inspirations by raising the shoulders. There was no difference in the heaving of the ribs on the two sides, and pressure beneath them seemed to give him no uneasiness.

At half-past eight in the evening, his pulse was 96, and his breathing 64, and very laborious, interrupted by much coughing, and by a great deal of mucus in his throat, which he did not expectorate.

At nine he had a fit, in which both eyes were drawn to the left, with contracted pupils, his left arm

was constantly shaken, he was covered with a cold sweat, coughed a good deal, and seemed to bring up mucus. His pulse was 148 in a minute. This state continued for about half an hour, after which his pulse came back to its former state.

At eleven P. M. he had another fit, similar to the former, except that there was somewhat less motion of the hand and arm ; after which, the attendants thought that the whole of the left side was become paralytic. Two or three other fits, however, afterwards occurred, with similar convulsive movements, notwithstanding which he again became sensible, and spoke. His respiration now becoming laborious and rattling, he died at half-past eight the following morning.

He was opened at nine P. M. on the day of his death, in my presence, by Mr. Cruttwell, surgeon.

In the abdomen, all the viscera were healthy, except that the vessels in the meso-colon, and mesogaster, were fuller than usual of blood.

In the thorax, on the left side, the pleura pulmonalis adhered transversely to the pleura costalis, so as to divide that side into an upper and lower cavity ; in the latter of which were contained about four ounces of pus, which extended downwards to the upper part of the diaphragm, and backwards to the posterior part of the mediastinum. That portion of the pleura pulmonalis which formed part of this cavity was covered with a crust of coagulated lymph, which strongly adhered to it, but did not extend to the pleura costalis. On the right side of the thorax there

were about three ounces of a similar matter, confined also by adhesion ; and a thinner crust of coagulated lymph here lined part of the pleura costalis, while that investing the lungs had no such exsudation, and was indeed paler than natural. There was no where else any inflammation of the pleura, nor any where the smallest ulceration of that membrane.

The lungs were also free from inflammation, and tubercles ; but here and there a small quantity of mucus or purulent matter oozed out from the bronchial vessels when divided by the knife. A small part of the posterior portion of the right lobe was of a darker colour than natural ; and having its air vessels compressed, was of a firmer consistence than the rest, and had less appearance of mucus or purulency.

The pericardium was exempt from inflammation, and contained a full ounce of transparent fluid. The heart within and without, was in a healthy state. In its right side there were coagula of blood, but none in the left.

In order to discover the cause of the convulsions in the eyes and left arm a few hours before death, the head also was opened.

The dura mater, which in itself had nothing worthy of note, being removed, the pia mater on the upper part of the brain, for about an inch to the left of the falx, appeared redder than natural ; and on both sides all the veins were more than usually distended with blood. The longitudinal sinus, down to its division into the lateral sinuses, was full of firmly coagulated blood, which made it feel to the touch

like a thick hard cord. The veins leading to it on the falx were prominent with similar coagula. The surface of the right hemisphere of the brain, for two inches and a half in breadth from the falx, was of a red colour with large patches of a blackish purple, which arose from venous blood here and there extravasated under the pia mater, and following the deepest convolutions of the cortex. The pia mater generally adhered with firmness to the brain, but most strongly on the right side. When the substance of the cerebrum was sliced, there were more bloody points than usual; but these were much more numerous on the right than on the left.

All the parts of the cerebrum, cerebellum, and medulla oblongata were carefully examined; but no other deviation from health was observable in their surface, substance, or cavities.

Probable Hydrothorax, following Pleuritis.—Mrs. E., a widow lady at an advanced period of life, was seized with an acute pain in her side, together with difficulty of breathing, increased by lying on the side affected, occasional, though little, cough, a slight expectoration of concocted mucus streaked with some florid blood, and a quick and strong pulse. The usual remedies for pleuritic inflammation were employed; notwithstanding which, at the end of a few days, though the cough, expectoration, and pain entirely ceased, and there was not the least wheezing or other indication of mucus in the bronchial cells, the breathing became in the highest degree laborious. In this state the patient remained during two days,

with a cool skin, a pulse not exceeding 60 in a minute, a livid countenance, and in a state of coma, till she died.

In this case, there were never any of those symptoms of weight and oppression of the thorax, and frequent cough, which indicate an affection of the substance of the lungs. The disorder was doubtless inflammation of the pleura, which, together with the symptomatic fever, subsided on the coming on of serous effusion into the thorax; and it was probably in consequence of this effusion that the lungs were so compressed, as to be no longer capable of admitting a quantity of air sufficient for the purposes of life.

Hydrothorax, following Pleuritis.—Mr. P., sixty years of age, tall, rather thin, for the most part temperate, accustomed to an anxious and laborious life, which often exposed him to sudden alternations of temperature, was about the 18th of October, 1805, seized with a severe cough, accompanied with expectoration of mucus. My first visit to him was on the 22d. His pulse was then quick and full, his skin hot, his cough not frequent, his expectoration small, his appetite defective, his bowels bound, and his urine very high coloured, depositing a copious red sediment. He could not readily make a deep inspiration, on account of a pain under the left breast, which made it difficult for him to lie on that side.

He was directed to have seven ounces of blood taken from the arm; to take thrice a day three grains of dried Squill with a scruple of Nitre; and on the following morning two pills, consisting of eight grains

of Compound Powder of Scammony, and two grains of Compound Extract of Colocynth.

The blood flowed with tolerable freedom into china teacups, and was placed in a situation in which it had time to cool slowly; notwithstanding which, though its texture was moderately firm, it exhibited no crust of coagulated lymph. No great relief having been obtained from this operation, ten leeches were applied to his side, and the medicines were continued, with the addition of Antimonial Wine. The pain soon disappeared, the cough left him, and he was able to lie with perfect ease on the side originally affected, and to all appearance to make as deep an inspiration as in health, without any inconvenience or coughing.

Still, however, the pulse continued to beat above 80 strokes in a minute, with some preternatural fulness and hardness, and the night water continued to deposit a copious lateritious sediment, while that of the morning, though high coloured, was clear. His tongue was clean, and his appetite tolerably good. He had, however, a considerable degree of weakness, which disposed him to prefer constantly lying in or on the bed.

The medicines now employed were, in succession or combination, aperients, squills, digitalis, antimonials, and the various saline refrigerants. But notwithstanding their use, he went on for some weeks without any perceptible change, with no evening exacerbation or night sweats, and certainly no increase of debility, and no apparent emaciation. His pulse still continued to beat between 80 and 90 times

in a minute, with a full and regular stroke ; his urine to deposit a red lateritious sediment ; his skin to be in a small degree hotter than natural. Blood taken from the arm exhibited a thick, tough, cupped crust of coagulated lymph. He never coughed, except voluntarily once or twice in a morning, for the purpose of expectorating a little transparent grey mucus, which for many years he had been accustomed to do. He lay with his head as low as usual, had no difficulty or shortness of breathing, and no pain or soreness in any part of the thorax. He appeared also to lie equally well on both sides, except that now and then after a full meal, which he eat with pleasure, lying on the left side was for a few minutes uneasy to him, till either he was accustomed to the posture, or the food had seemed to him to pass out of his stomach. All this I repeatedly saw ; for I visited him at various periods of the day, and, as he continued to be weak, I almost constantly found him in bed. For this reason I had no opportunity of learning how his respiration or circulation might have been affected by the exercise of his muscles. The uneasiness while he lay on his left side was not acknowledged by him but with difficulty, after many questions, and at somewhat advanced period of the disease ; and when the disease was still farther advanced, it was acknowledged no more.

About the 24th and 28th of November, there were two rather severe fits of shivering, followed by increase of heat, and sweating ; in consequence of which I thought myself justified in giving him some

Bark, which was accordingly administered from the 29th of November till the 6th of December. No return of rigor having taken place, the Bark was now discontinued ; and all the symptoms became much as before. On the 11th of December the pulse was 120, and the respiration only 28. On the 14th, the former was 108, and the latter 30. All remedies were now omitted, except opiates, in order to counteract the restlessness of his nights, and aperients as circumstances required.

Under these circumstances of obscurity, I proposed a consultation, and on the 15th of December had the assistance of an eminent physician, to whom I suggested the following explanation of the symptoms. It appeared to me, that, notwithstanding the absence of the crust of coagulated lymph on the blood soon after the first attack, all the symptoms were such as denoted inflammation, not of the substance of the lungs, but of the pleura on the left side. With this state the fever had been originally connected, and still continued without having suffered any interval. Both the urine and blood shewed the existence of some present local inflammation, which was confirmed by the length of the disease, and the fits of shivering before mentioned ; and when we looked to the original symptoms, and considered that if any marks of local disease then existed, they were, however slight, confined to the thorax only, I could not help concluding that slow inflammation of the pleura still continued, producing all the symptoms, and threatening a termination in hydrothorax on the left side.

Various means were now employed, but with no better success than before.

In a few days the patient, wearied by the importunities of his friends, consented to see an itinerant German empiric, who promised to cure him in a fortnight. He communicated this acquiescence to me with so much modest regret, that I assured him of my readiness to renew my attendance on him, whenever he should request me.

On the 12th of January, 1806, he desired again to see me. The symptoms were now no longer ambiguous. His breath was greatly oppressed, laborious, and rather convulsed; and he could lie only on the left side. He could not make a deep inspiration; and while his pulse was 146 in a minute, he respired during the same period 40 times. In order more minutely to examine the circumstances of respiration, I had him turned on his back, and the thorax and abdomen stripped. It was then obvious, that the process of respiration was carried on chiefly on the right side of the thorax; as the ribs on the left were very little elevated, and, what was more extraordinary, the abdomen on that side much less protruded by the descent of the diaphragm, than on the other side. With a view to farther information, I made the following experiment. Pressure with my hand below the ribs, on the left side, produced little inconvenience, while the same pressure on the right caused an intolerable oppression, threatening immediate suffocation. These circumstances appeared to me to

demonstrate that considerable extravasation had taken place into the left side of the thorax.

In addition to these symptoms, the patient coughed much more than before, and expectorated thick, opake, whitish-yellow mucus or pus, which had no offensive smell.

Not choosing to act in this case by myself, I was favoured with the assistance of my former medical associate, to whom, as it was evident to both of us that the patient could not survive many days, I proposed the paracentesis of the thorax, as the only means of saving or even prolonging life. This was assented to by him, and by the patient, and the operation was on the 13th, at half-past five P. M., very skilfully performed by the scalpel of Mr. Norman, senior, between the ——— and ——— true ribs, two or three inches behind the anterior angle. The opening being made, no fluid followed; not, however, in consequence of adhesion, for a probe could be readily turned all round, for two or three inches, between the ribs and lung. The patient was laid on the affected side, but still without any efflux of fluid.

No inconvenience whatever appeared to result from the operation. At six the same evening, the pulse was 138, and regular, but weak; the respiration, as on the preceding day, 40, and rather convulsive.

On the following day, January 14th, the pulse was 132, and the respiration 42.

On the 15th, the former was 132, and the latter 44; and on the following evening he died.

The body was submitted to anatomical investigation on the 18th of January, at half-past eight A. M.

In the right side of the thorax there were twelve ounces of bloody serum ; but no disease or adhesions in the lung or pleura.

The left lung was firmly adhering on its forepart to the pleura costalis ; and both pleuras were there extremely thickened, to at least one eighth of an inch, and not capable of being separated. On the middle and posterior part, and also before from the fourth or fifth rib, the adhesion was wanting, and the free space contained nearly twenty ounces of bloody serous fluid, with small portions of coagulated lymph floating in it. This fluid, as the body lay, reached up to within two inches of the part where the puncture was made, which was found to have penetrated into the cavity of the thorax, without wounding the corresponding pleura pulmonalis. The lung was sound, free from tubercles, and contained black blood. The surface of the pleura pulmonalis contiguous to the fluid had begun to ulcerate to about the extent of a half-crown. The heart and pericardium were free from disease.

The wounded part of the integuments was completely healed.

No other part of the body was examined.

Death from Pulmonic Inflammation, without Cough. With Dissection.—Feb. 19, 1814. The infant son of Mr. D., aged nine weeks, fat, and fully grown, was first observed to be ill on the 17th, having some degree of wheezing, and coughing once or twice during the day. That night, when accidentally

seen by Mr. Phinn, apothecary, he had no apparent difficulty of breathing, was sleeping well in the horizontal posture on the nurse's lap, took food readily, and was free from cough and preternatural heat. The bowels had been freely open.

On the 18th, he had no cough or any perceptible disease, and sucked with appetite and ease; but as the family had been subject to pulmonic complaints, Mr. Phinn sent an emetic, to be taken if cough should come on.

On the 19th, at six in the morning, the infant began to wheeze, and exhibit other marks of difficulty of breathing. The emetic was therefore given, and when I saw him in the forenoon, had operated well both on his stomach and bowels. The pulse was now 180, and full; the respiration for the most part grunting, in expiration, and then 62 in a minute; and when not grunting, 104 in a minute. Skin cool. Squills were largely administered, and a blister applied to the thorax.

In the evening I found the Squills had produced considerable nausea; the pulse was slower, being about 164 in a minute, the respiration was also slower and less grunting, and the infant, whom I should have remarked as having cried in the morning, when placed in the horizontal posture, now no longer did so. The skin was cool. Medicines were repeated.

About three in the morning of the 20th, the infant was seized with sudden spasmodic affections of the organs of respiration, which returned at various times till somewhat after eleven, when I again saw him.

The pulse was then beating several times in regular succession, and with a full stroke, about 70 in a minute; immediately after which the pulsations became slow and intermittent, and by degrees entirely stopped. At the same time the respiration was interrupted by convulsive sobbings, in which the thorax was raised by the intercostals; and soon these sobbing inspirations constituted the whole of what remained of breathing. They became themselves less and less frequent, so that they never occurred oftener than once in a minute, and occasionally not for two or three minutes, and then consisted only of a single inspiration. No pulse in the radials was to be felt; but whether any beating of the carotids or heart remained, I could not, on account of gout in my wrists, discover. From the long interval, of two or three minutes, without any breathing, which had now, at the end of a quarter of an hour, occurred, accompanied with a total absence of pulse in the radials, paleness of the face and arms, and perfect stillness of the whole frame, I could not help concluding that the infant had breathed his last. The skin at the same time was not peculiarly cold, and was free from moisture.

After, however, one or two minutes more had elapsed, another convulsive inspiration took place, and was soon followed by others at shorter intervals; immediately after which the back part of the cheeks became mottled with a faint blush of crimson, which soon gradually extended itself forwards over the face, and was about the same time observable on the arms.

As yet, however, no pulse could be perceived in the radial arteries; but as the breathing approached more to the natural state, a weak irregular pulsation began in them after an interval of about three minutes from the first return of inspiration, and soon increased so as distinctly to reach 160 in a minute. The respirations at the same time were about 72, and each emission of the breath was accompanied with more or less of the grunting before observed, and there was also some stertor or rattling in inspiration.

The infant now opened his eyes, and moved his head. I left him between twelve and one o'clock. Paroxysms similar to that above described recurred at various times till three in the afternoon, when he died. The following account is by Mr. G. Norman.

Dissection.—"In the left side of the thorax there
"was half an ounce of bloody serum. The pleura
"was every where red and inflamed, and in many
"parts covered over with a layer of coagulable lymph,
"by means of which adhesions were formed between
"the concave surface of the upper lobe of the lungs
"and the pericardium, and between the concave
"surface of the lower lobe and the diaphragm. The
"adhesions were easily separated. The whole of the
"lower lobe of the lung was of a dark red colour, and,
"on its anterior surface there was an ulcerated spot,
"of the size of a sixpence, opening into an abscess in
"the substance of the lung, which contained half an
"ounce of pus tinged with blood. The upper lobe
"of the lung was much more red than natural.
"There was no adhesion, or any appearance of in-

“flammation, on the inner surface of the pericardium.

“The heart was natural. There was no inflammation in the pleura in the right side of the chest ; but the substance of that lung, when cut into, appeared red.

“In the abdomen, every thing was natural, except that the liver appeared more turgid, and internally of a brighter colour than usual.

“There was no appearance of inflammation in the villous coat of the stomach, or the large or small intestines.

“The brain was free from disease.

“With respect to the differences which we have so often observed to exist between the brains of infants and adults, they were in this infant as follows : The dura mater adhered more firmly to the bone. There was little or no distinction between the cortical and medullary substance of the brain ; the external part wanting the deeper colour of the cortical, and the internal not having the whiteness of the medullary. The whole was semi-transparent, of a bluish cast, and much softer than the adult brain. The olfactory nerves were large in proportion to those of the adult ; and the corpora olivaria, and pyramidalia, were more distinct.”

From the state of fatness and growth of this infant, no disease could have existed previously to the 17th, and one can scarcely trace any important malady farther back than the morning of the 19th. If that be the case, the whole process of pulmonary suppuration must have taken place in thirty-three hours.

This case also affords a further proof of the truth of the principle which I have long wished to establish, that cough is not an essential symptom of peripneumony or pleurisy. A better criterion, and I think a certain one, where there is no evidence of abdominal inflammation or tumor, is the state of respiration ; more especially its quickness relatively to that of the pulse, and that peculiar grunting in expiration, to which I have so often referred. I do not recollect ever to have seen a case in which even an infant survived a pulse of 104 ; and the grunting always implies great embarrassment of respiration.

In such cases, blood-letting by leeches should immediately be employed ; but not more than one, or at the utmost two, be applied to the thorax at once ; for I have seen an infant nearly bleed to death by the application of a greater number ; and any bandages to stop the blood would by their pressure on the thorax add to the difficulty of inspiration, and thus aggravate the malady.

Peripneumony, with Dissection.—1813. Miss H., aged three years and a half, of a very full habit, but accustomed to exercise, and a moderate diet, was seized, on the 20th of January, with slight sore throat, shortness of breathing, and a cough, which was not frequent, and was attended with inconsiderable fever, but without pain in any part of the thorax or abdomen. On that day she took an emetic, and afterwards, under the care of an extremely attentive and skilful physician, had leeches and a blister applied to the thorax, was freely purged, and took antimonial medicines.

I saw her in consultation on the 24th, at a quarter before ten in the evening. There was some preternatural heat on her body, but none on her extremities. Her tongue was moist, and little furred. Her pulse was 150 in a minute, tolerably full, but soft. Her respiration, as she was sitting in her nurse's lap, was 75 in a minute, almost wholly by the diaphragm, and with the grunting expiration which I have so often observed in the greatest degrees of dyspnœa. She coughed occasionally, and seemed to bring up some expectoration, which removed some slight wheezing, under which she for a moment before appeared to labour. She seemed placid, and when asked, denied that she had pain any where. The recumbent posture increased the quickness of her respiration, but there was no apparent difference, in this or other respects, whether she lay on her back or either side. Her bowels had been freely opened in the course of the day.

Leeches were ordered to be applied to the chest, blisters to the inside of the thighs, and the medicines to be continued.

On the 25th, at ten in the morning, the pulse was 100, very weak and irregular, and the respiration 88, and without the noise in expiration. She was then lying in bed on her left side, perfectly sensible, but with much lividness of skin.

Ammonia was ordered to be given her freely, and a blister was placed on the thorax.

She died in the course of that day.

She was opened on the following day about three o'clock, P. M., by Mr. Long, surgeon.]

The pleura pulmonalis was found variously adhering to the costalis, but there was no effusion into the thorax, or any mark of recent inflammation. The substance of the right lobe of the lungs was throughout preternaturally solid, in consequence of sanguineous congestion ; but not in the same degree as part of the left lobe, which, being cut off, sunk in water. The whole of both lobes, when cut into, exhibited little of that appearance of air passing out of the cells which is common in a more healthy state of that organ. The heart and pericardium were free from disease.

The liver was somewhat larger than is usual at the patient's age ; but both it and all the other abdominal viscera were in a sound state.

The symptoms of this case led us to a just conclusion as to the real nature of the disease.

It was evident from the quickness of respiration, relatively to that of the pulse, that there was some obstruction to the power of inspiration. This obstruction could not arise from pain any where, for none had been felt. Therefore, there was no pleuritic inflammation. It was probably not owing to that obscure disease pericarditis, because she seemed to lie equally well on both sides. It seemed too rapid in its progress to be hydrothorax, and indeed too violent. It did not arise from any obstruction below the diaphragm, for she breathed chiefly by the diaphragm. The disorder could not arise from bronchitis, and effusion into the bronchial cells, because there was little cough, and no wheezing or rattling as from the breath passing through a fluid. On the whole I

concluded it to arise from sanguineous compression of the bronchial cells, such as is usually found to exist in cases of fatal peripneumony.

Pleurisy.—Master G. S., aged six months, subject to frequent oppression of the chest, was seized about Monday, May 13, 1805, with violent catarrh, cough, and fever; which appeared to be much relieved on the 19th, when the child was taken out, and that night seized with vomiting and bowel complaint, for which various remedies were given. On the 20th I saw him, when his pulse was 152, his respiration in some degree laborious; he was crying in a hoarse voice, and now and then, but seldom, coughing hoarsely. It was difficult to distinguish his coughing from crying. His stools were slimy and green, and his bowels rather swelled and hard, and he was extremely restless. Glysters, James's Powder, and aperients, were given, together with opiates. His stools became of the natural colour; his pulse, respiration, &c. continued as before, with little cough or evident affection of the lungs. For the two days preceding his death, he drank freely of ass's milk, and cold broth made of leg of mutton. He died in the afternoon of the 24th May; and was opened the same evening.

The stomach and intestines were much distended with wind, but were within and without free from disease. The mesentery and mesicolon were full of glands, somewhat enlarged and preternaturally red. There was no fluid in the cavity of the abdomen, all the other viscera of which were in a sound state.

In the thorax, the lungs adhered slightly on both

sides, except on the posterior part, to the pleura costalis, in consequence of a very thick exsudation of yellow coagulated lymph, which was spread over the corresponding part of the pleura pulmonalis. In the left of the thorax there was about an ounce, and in the right about three ounces, of yellowish serum. The substance of the lungs themselves, and the heart and large vessels, were free from any preternatural appearance.

Anasarca and Hydrothorax.—Maria C., aged forty-nine, a single woman, cook to Mr. L., some years past the period of menstruation, and always given to drinking, was six months left by the family on high board wages, and during this time indulged herself in a most intemperate use of strong liquors. Six weeks ago, which was a month before the return of the family, she fell down and considerably hurt her left knee, which swelled very much, but got well without any important applications. Shortly after the accident, anasarcaous swellings began to appear in her lower limbs, and soon extended themselves up the thighs, round the trunk of the body, and to the arms and hands.

In this state she was seen on the 1st of February, 1812, by Mr. G. Kitson, who found her with a dry furred tongue, a hard quick pulse, with no marks of visceral disease, and with urine natural as to quantity and colour. He gave her Elaterium and other brisk purgatives, which, when I visited her on the 17th, had removed the œdema of the trunk of the body, though the swelling of other parts continued. Her

whole skin was pale, and free from preternatural heat; her tongue covered with a thick, smooth fur; her urine natural; her appetite for solid food altogether wanting; her pulse 92 and regular, but hard. She had been purged frequently during the night, and shewed a good deal of incapacity of recollection. There was no apparent swelling or pain on pressure in the region of the liver.

Ten ounces of blood were taken from the arm, and all other remedies omitted.

Feb. 18. She had a good night. The blood, as it flowed from the arm, was florid like arterial blood, and this morning the crassamentum is in due proportion to the serum, firm and very florid, and covered with a crust of somewhat cupped coagulated lymph, of the thickness of a crown piece. Swellings somewhat softer. Pulse 74, regular, and more soft. Two motions. Tongue and urine as before.

Mitt^r Sanguis è Brachio ad ʒxii.

Feb. 19. She found no inconvenience from the bleeding. Her blood, taken in four teacups, is now free from any peculiar floridness, firm in texture, more contracted than that of yesterday, and with a thicker concave crust of coagulated lymph. Her night was not quite so good. Her recollection seems much improved; her tongue is somewhat more free from fur; and the swelling is in general abated, and has quite left her right hand. Urine as before. Three loose motions. Pulse 72, and regular, but more full and hard.

Mitt^r Sanguis è Brachio ad ʒx.

Feb. 20. She slept ill, though without being able to assign any cause. The crassamentum of the blood is of a dark colour, very firm, and somewhat concave on the surface; though only the first cup has the crust of coagulated lymph. Three loose motions. Pulse 76, and full. Skin cool. The crust on the tongue seems separating from the edges; but she has no appetite, and is extremely desirous of cold drink and ice, which I have advised her to take with freedom. Oedema somewhat lessened.

℞ Scillæ exsiccatae ʒj.

Pulv. Folior. Digitalis gr. vi.

Confect. Rosæ Caninæ, q. s. sit Ft. Pilulæ xx
æquales. Sumat unam 4^{ter} die.

Feb. 21. Each pill made her sick, and has produced frequent straining to vomit. Her night has been very much disturbed, and she complains of considerable pain across her forehead. The swellings are somewhat increased since yesterday. Four loose motions. Pulse 82. Respiration 24. Tongue more clean.

℞ Extracti Colocynth. compos. gr. viii.

Hydrargyri submuriatis gr. ij. Ft. Pilulæ duæ
æquales. Sumat unam hac nocte horâ somni,
et cras primo mane.

Feb. 23. She has daily had three or four motions. Her breathing, especially on moving, appears somewhat hard. P. 70—80. R. 28. Swellings as before.

Repet. Pil. è Scil. cum Dig.

On the 24th, she was visited by Mr. G. Kitson, who found her much as before, except that she had

somewhat more of difficulty of breathing, though her pulse was regular.

On the 25th, he again saw her. She was then affected with laborious and rattling respiration, was unable to lie down, and was evidently in a dying state. About half-past two P. M. she expired.

At my visits, she never complained of difficulty of breathing, incapacity of lying horizontally, or on either side, or of any pain about the thorax; and at various times made deep inspirations, with no apparent distress. I was very particular in all these inquiries, because I had previously mentioned that this woman would die with symptoms of thoracic extravasation.

She was opened on the following morning at eight o'clock, by Mr. G. Kitson, in my presence.

In the head, the substance of the brain was peculiarly hard, there was somewhat more than the usual proportion of fluid in the lateral ventricles, and the tunica arachnoides was preternaturally thick and firm.

Both sides of the thorax contained clear effused fluid, which on the left side was in very large quantity. The pericardium was greatly distended with a similar fluid, to the amount of at least twelve ounces. The vessels on the external surface of the pericardium were full of blood, so as to give that part an unusual degree of redness; but nothing of that kind was observable on the pleura costalis or pulmonalis. The whole anterior surface of the heart, together with its apex, and the corresponding part of the inside of the pericardium, were rough, with a thick coat of extravasated coagulable lymph, which

was with no great difficulty separable in crusts or flakes. It seemed highly probable that, previously to the extravasation of serum, these parts had cohered; and an adhesion still remained between a portion of the right side of the right auricle and the pericardium. In the right ventricle there was much fluid blood, and in the auricle a coagulum, which had separated into lymph and cruor of a black colour. The substance of the left ventricle was unusually thick and firm, and the heart altogether larger than natural. The inside of the ventricle was void of blood. All the valves were in a sound state. The substance of the lungs was full of serous fluid, which flowed out in great quantity wherever they were cut. In other respects they were free from disease.

In the abdomen, the liver was extremely and uniformly enlarged, so that the edge of the left lobe was in contact with the anterior angle of the ribs on the left side. It was on its surface smooth, and throughout hard; and when cut into pouring out fluid blood, and exhibiting on the cut surfaces a mottled porphyry-like appearance, but no distinct scirrhusity. In consequence of this enlargement of the liver, the stomach was pressed downwards, and so diminished in transverse diameter, as to resemble colon; but was free from disease, except that the villous coat, as is not uncommon in such cases of contraction, formed large irregular prominent folds. The spleen was large, firm, and, in its substance, resembling sound liver. The pancreas was large and hard. The gall bladder was full of bile, but free from gall stones. The

kidnies were hard and firm, but not enlarged. The intestines and peritoneum were in a natural state. In the abdomen there was a small quantity of serous fluid.

Hydrothorax and Death, with natural quantity and colour of Urine.—Mrs. B., between fifty and sixty; Sir J. L., about fifty; Mr. N., twenty-five; Miss K., sixteen; were all without any evident affection of the liver or heart; and all died at length, though that did not appear in the beginning, with symptoms of hydrothorax. Mr. N., had no sensible complaint; but was ill many months. He said that the complaint was at one time cured by drinking a vast quantity of green tea. In all these cases, and others, nothing seemed to afford relief. The urine was always in quantity, fully equal to that of health, and in the first, third, and fourth cases of exactly the natural colour and appearance, clear, and without sediment.

Catarrhs.—In the winter of 1814—15, severe catarrhs in many instances proved fatal by affections of the bronchia and head, accompanied with high inflammatory state of the blood. In other instances, persons were affected with inflammation of the mucous membrane of the small intestines, without vomiting, and usually with little pain. These complaints attacked children and adults. Several died shortly and unexpectedly of the bowel complaint, and in several instances the disease of the mucous membrane of the nose, &c., transferred itself to that of the bowels.

Lungs, and Blood-letting.—Dec. 21. Blood-letting is to be sparingly used in affections of the lungs,

where there is much mucus poured out into the bronchia.

See the contrary cases of Mr. H., and Mrs. M.

In *Hæmoptoe*, the blood at first often comes away in a florid state, yet afterwards, on stagnation, it is spit up thick, more or less coagulated, and of a dark colour. How is this to be explained? If continually acted upon by atmospherical air in inspiration, it ought to be florid. But I suppose it stagnates in the bronchial cells, after having been poured out, and is not breathed through.

Hæmoptoe, &c.—In Mr. B., aged about sixty, long affected with a cough and copious expectoration, accompanied on the day of my visit with spitting of blood, without any very obvious emaciation or prostration of strength, the extremities were cold and livid, the pulse 52 and weak, and the blood drawn from the arm had a thick tough crust of coagulated lymph, the whole crassamentum being firm and much contracted.

Blood and Pulse in Hæmoptoe.—In Mrs. M., Feb. 10, 1808. *Hæmoptoe* of florid blood, with a soft pulse of 72 in a minute, and blood with a thick crust of coagulable lymph, but not cupped.

In Captain M'D., *Hæmoptysis* was brought on by some one knocking at the door.

Effects of Stimulants in Hæmoptoe.—Mr. B., aged somewhat above thirty, had violent hæmoptoe, with quick pulse and other symptoms of fever. He was bled, employed refrigerants, and abstained from all animal food, and warm or stimulating drinks. Thus

he went on for several days with a total exemption from hæmoptoe, and with little cough or quickness of pulse, apparently convalescent; when, tired of what he called low living, he would eat a basin of warm broth; within ten minutes after which he was seized with new hæmoptoe, which in a minute suffocated him.

In Mr. L., of about the same age, after the cessation of hæmoptoe for a fortnight, an immediate return was produced merely from walking down and up stairs.

Empyema.—In the spring of 1803, Lord H. was considerably affected with the usual symptoms of influenza, which left behind some fever, together with a cough, and pain rather below the false ribs on the left side. This pain, on account of its seat, was, by the physicians who then attended him, assigned to the kidney.

It was not till some months afterwards that I first visited him; a short time previously to which, in the midst of a fit of coughing, he had suddenly thrown up a considerable quantity of purulent matter, of a most offensive smell.

From this period, he lay with tolerable ease, and exempt from coughing, on his left side; but as soon as he turned on his right, the coughing immediately occurred, which was for some time dry, but accompanied with a halitus of the same foetid kind as that which proceeded from the sputa. After this foetor had taken place, so as sometimes to fill the whole room, a small quantity of purulent expectoration accompanied the succussions of coughing.

These symptoms continued for some weeks till he died, June 20th, 1803.

It is proper to remark that Lord H. had been long subject to great inflation of his bowels, which were in a very irregular state, and required the almost constant use of opening medicines.

His body was opened in my presence by Mr. Tudor, about six hours after death.

Externally, the abdomen was considerably distended, but not hard. This distention was found to be owing to the state of the colon, which in various portions, from two to eight or nine inches in length, was from three to four inches in diameter; most of the intermediate spaces, throughout its whole length, being not larger than the little finger. The transition from one to the other size was every where abrupt. The coats of the colon were no where preternaturally thickened. It contained only a small quantity of *fæces*, but the dilated parts were full of wind, which could scarcely be made to pass by pressure through the various contractions. In consequence of this undue distention, the right lobe of the liver was pressed upwards out of its natural place. The stomach was also greatly distended with wind; but its coats, and those of all the rest of the intestinal tract, were in a healthy state.

The liver and spleen were in every respect sound and free from adhesions. The gall bladder was small, had in it little bile, and no concretions.

The peritoneal coat of the upper part of the abdomen on the left side was much thickened, as from

recently terminated inflammation. The omentum also was greatly thickened, and strongly adhered to the peritoneum; and there was a similar adhesion between the corresponding parietal portion of that membrane and the peritoneal covering of the left kidney. The kidneys were themselves free from disease. In the thorax, the right lobe of the lungs was perfectly sound. The pericardium, on the left side, adhered so strongly to the pleura costalis, and adjacent parts, that it could not be separated without the greatest force. The left lobe of the lungs was shrunk to less than one third of its natural size, and for the most part firmly adhered to the pleura costalis and diaphragm. On its lower side, it was separated from the former by an abscess of considerable extent, which, when opened, exhaled a most offensive odor, but contained a very small quantity of purulent matter. It was through the ulcerated surface of the pleura, lining the corresponding part of the left lobe of the lungs, that the matter from this abscess had found its way into the bronchial cells, from which it had from time to time been thrown up by coughing. The pericardium had within it about an ounce and a half of fluid, and was not diseased in its internal surface.

The heart contained little blood, and was in a sound state, except that two of the tricuspid valves had in them considerable bony concretions. The mitral and semilunar valves, and coronary vessels, were free from disease.

I have seen many other instances of the disease which proved fatal to Lord H. In one of these, the

halitus attending the coughing was so diffused, that it filled the whole house, from the third story in which the patient slept, to the street door, with a stench which was almost intolerable.

From the dissection of Lord H., as well as from other circumstances, I think it highly probable, that in all these cases the inflammation began in the pleura, which at length became ulcerated in some part investing the lungs; and that in consequence of this ulceration a communication at last took place, through the substance of the lungs, with the bronchial cells, after which the matter of the ulcerated surface came to be spit up through this secondary, and if I may be allowed the expression, accidental passage. Hence we can easily understand why there should be little cough or difficulty of breathing while the patient lay on the affected side; and why, on his turning to the opposite side, the matter should flow from the pleura into the aperture through the lungs, then the most depending part, and thus excite the expulsive efforts of coughing, and the fœtor attendant on the breath tainted by contact with long confined purulent matter.

Atrophia Trachealis.—Miss P., aged between thirty and forty, has the following complaints, which are of several months standing. They began with soreness in the throat, which was soon followed by hoarseness, and then by cough. The latter symptom has, of late, increased, and is accompanied with expectoration of an ambiguous kind. Once, about a fortnight ago, she spit a good deal of blood.

The complaints may evidently arise from an affection

of the upper part of the trachea, probably of the mucous glands there situated. The thorax does not appear to be as yet at all affected. The local disease produces some difficulty of inspiration and expiration, but no uneasiness is felt on dilating the lungs, and no inconvenience is perceived from the horizontal posture on either side. The pulse at no period of the twenty-four hours, from ten in the morning till ten at night, has exceeded 66 in a minute; and she has had no shiverings, at least for several months past. Notwithstanding which the blood shews a strong inflammatory crust. Miss P. has for many weeks had night sweats, and is in a state of very considerable and increasing emaciation. These circumstances preceded sickness, which appears to arise from the use of opium, (which, however, is necessary to allay the cough,) and also uneasiness in the bowels, which is comparatively of a late date. The bowels themselves are tolerably open, and not too much so.

The constitutional complaints cannot be the consequence of the local affection of the trachea, but are probably the effect of some general disease acting upon the glands of the trachea among the rest. They form a species of atrophy, rather than of hectic, which I fear will end fatally.

℞ Calomel. Sulph. Antim. præcip. āā. gr. x.
diligenter contritis adde Extr. Pap. alb. ʒj. ut
ft. Pilulæ x æquales. Sum' i. h. xi. a. m. et 7^a
p. m. q.

℞ Pulv. Rhabarb. gr. x. Kali Vitriol. ʒss. contritis.
adde Aq. fontanæ ʒx. ut ft. H. p. m. et m. s. q.

The dose of the above to be regulated so as barely to affect the mouth, and to keep the bowels gently open. I wish a tepid bath at 92°, to be used twice a week. This lady tried the tepid bath, and sea air at Exmouth, but died some months afterwards under aggravated circumstances of the complaint.

Inflammation of Trachea.—On the 23d of April, 1814, I was called to see a poor young man, servant to a fishmonger, who for a year and a half had been in a state of declining health, with symptoms which I was unable to ascertain, but who, in the summer of 1813, had laboured under cough, with pain affecting both sides of the thorax.

About two months before my visit, he began to be affected with soreness low down in the throat, aggravated by swallowing, and accompanied with a sense of stricture impeding in some degree his respiration, and with frequent coughing. For this complaint he was often blooded from the arm, and blistered on the thorax; notwithstanding which, the symptoms had increased to such a degree, that at my visit his breathing was always extremely difficult, and sometimes almost impracticable. It was then always accompanied with a wheezing sound, both in expiration and inspiration, but was only 20 times in a minute, while the pulse was 120, strong, and full. The inspiration appeared to be performed by the intercostals only, the shoulders being in no degree raised, nor the abdomen raised by any descent of the diaphragm. At each inspiration the epigastrium was tucked in, and returned to its

natural state of evenness or convexity, when the ribs fell during expiration. I found that the patient could breathe as well in the horizontal as in the erect posture, equally well on both sides. No disease could be perceived in the throat, nor any swelling externally in the neighbourhood of the glottis, though there was some soreness to the touch, when hard pressure was made below the cricoid cartilage. He had at no time spit blood. All expectoration had for a few hours ceased.

From these circumstances, conceiving the part affected to be the glottis or trachea rather than the lungs, I ordered some leeches to be externally applied, and the orifices afterwards covered with lukewarm poultices, so as to promote as much as possible the discharge of blood. Whenever also he could swallow, which he did with great difficulty, he was directed to take a teaspoonful of a mixture consisting of six drachms of Syrup of Squills and two drachms of Syrup of Poppies.

On the 4th, I found that the leeches had drawn well, and that the poor man had been able to spit up what appeared to me to be merely thickened mucus. He also thought himself somewhat better; but I could not perceive this. On the contrary, while I was with him, there was twice or thrice such a struggle in order to cough or breathe up a little mucus, that I expected that he would die. His breath and pulse were exactly as at the former report, and his face, as before, very pale. The medicine was continued.

He passed the night with less inconvenience from

his breath, having had one stool in the evening. He had, however, a great deal of feverish heat till towards the morning. On the 5th, when I saw him, his respiration was less sonorous, and not more frequent or difficult than on the preceding day ; but his pulse was about 126, and very full and strong. What he had expectorated was small in quantity, and of a yellower colour. Having at my desire attempted to swallow some liquid, before I could have presumed that it had reached the stomach, he was seized with a fit of coughing mixed with strangulation, in which the whole of the upper part of his body and arms were for some time thrown into the most violent contortions, as if to prevent immediate suffocation. This I was informed was in a greater or less degree the constant effect of similar attempts.

He was desired to renew the application of the leeches, and to persevere in the use of the medicine.

The leeches drew well, and the orifices continued long to discharge. Through the night he had a good deal of dozing sleep, and on the 6th had less difficulty of breathing and hoarseness, with only occasional wheezing. He had also spit up a good deal of mucus, and, in my presence, swallowed some liquid with somewhat more ease, and with no subsequent contortions. His medicine was taken regularly. No stool. Pulse 128, and less full. Skin cool. Respiration 24. It was ordered that the medicine should be continued.

On the 7th, at five P. M., I found that he had a good motion the preceding day, and had continued

to take the medicine once in four or five hours, swallowing with less difficulty and inconvenience. His urine was about the natural colour. His respiration was 20 in a minute, and much less sonorous, being partly by the diaphragm, with less of that drawing in of the epigastrium in inspiration before described. He had expectorated very largely of what still seemed to be mere mucus. His pulse was only 100, regular, and much more soft. The pulsation of the abdominal aorta, from the epigastrium downwards, was as before preternaturally strong, and he continued, as from the first, to complain of pain at the scrobiculus cordis increased by pressure. His countenance and lips were less pale; his skin cool. No new indication arising, he was ordered to continue his medicines.

On the 21st of April, I found him in many respects better. He had for some days left his bed-room, and had a good appetite. His cough and expectoration were greatly diminished, and he swallowed liquid with little difficulty, and without subsequent suffocation. His bowels were regularly open. His pulse was 106, and soft, and his respiration 18. Still, however, he continued to have a great degree of hoarseness, so as scarcely to be able to speak above a whisper.

Phthisis not always attended with much Pulmonic Affection.—Hectic fever accompanied with a certain degree of cough, and occasional spitting of blood accompanied with a small expectoration of ambiguous matter, is not always attended with much apparent affection of the lungs, or at least difficulty of respiration. Thus in Miss E. S., greatly emaciated by long

but gentle hectic, and with the symptoms about the chest just described, whose blood had been for many months in a state of inflammation, and who was subject to frequent pain, and occasional looseness of bowels, the pulse, June 14, 1809, was 112, and the respiration 28, which is the due relative proportion.

A Blue Patient.—July 14, 1802. Miss E. V., aged nineteen, rather short and plump, with dark hair, and the general appearance of being only thirteen or fourteen years old, was first observed at five years of age to have a blueness or lividness of the skin, accompanied with short and laborious respiration, especially on any muscular exertion. These symptoms diminished at the age of 15, when she began to menstruate; and from that time she had less of the blue appearance of the skin till the past winter, when she had the whooping-cough; and again within these three months, that the catamenia have been obstructed. Since that period, all her complaints have been much aggravated. At this time, even while she is at rest, there is some lividness in the inside of her eyelids, nostrils, and lips; but on muscular exertion there is general lividness or blueness of the skin, with violent palpitation of the heart, and great shortness and labour of respiration. She is sometimes affected with very deep and alarming fits of fainting. Her appetite is good; but eating always increases her complaints. She is generally costive; bears cold ill; sleeps tolerably well, though sometimes disturbed by startings; and, when at the best, is lively and in good spirits.

She was ordered to take the Nitric Acid largely diluted, to avoid strong exertions and large meals, to be out as much as possible in the open air, and to keep her bowels regularly open.

July 5, 1803. She continued the acid mixture for a considerable time, and thought herself much relieved by it. Pulse 104 and regular, while at rest. On exercise it beats very quickly, though regularly, and her heart strikes strongly against the hand; but she is certainly less livid on exertion than she was. When sitting still, she has no difficulty of respiration, and lies equally well on both sides; but from exercise the palpitation of the heart is attended with laborious breathing, a pain in her breast, and a beating and noise in the head, which, for the time, make her deaf. She has frequent headaches. Her sleep is irregular; and now and then she is sleepy during the day, especially since the commencement of hot weather, ever since which she has been occasionally faint from walking, even down stairs, with a sort of catching all over her. Hands and feet cold. Her appetite is bad, and she is still worst after eating. Bowels open. Urine high-coloured, defective in quantity, and occasionally thick. Menses regular, copious, and of dark colour. No swelling of her ankles.

By my direction five ounces of blood were taken from her arm. It was of an unusually black colour.

July 13. On the 8th, she had an hysteric fit, and has since been more disposed to palpitation and fainting, even when in bed. The weather is extremely hot, but she has not been sensible of any inconvenience

from it till to-day, being usually better in warm weather than in cold. Since the bleeding, the back of her head and neck has been much affected with pain. Her skin is very livid to-day, on exercise. Her appetite is very bad, and she has frequent pain in her stomach. Bowels open. Pulse 118, and full.

Sumat bis in die Rubiginis Ferri præparatæ, Sacchari albi, Cinnamoni āā gr. v.

I saw this young lady (Miss V.) again, eight years after, June 10, 1811. She was moderately fat, and when at rest, of a nearly natural colour in her face, though her hands were still of a livid red. Her pulse was about 80, and a little unequal as to the several beats; and her respiration about 20. She was able to make a tolerably deep inspiration. After going slowly up twenty stairs, and again coming down, her face and hands became livid, though certainly in a much less degree than formerly; her breath 24 in a minute, and her pulse 96, with somewhat more of inequality. She lay best on her right side, slept ill without being able to discover why, but was occasionally seized with fits of suffocation. She was free from cough. Her tongue was clean; her appetite good; bowels regularly open; and feet warm. She menstruated at the just periods, and in proper quantity; but the blood discharged was of an unusually dark colour. The urine was for the most part natural; but just before the menstrual period, it was small in quantity, and high coloured; and her ankles and feet were accustomed to swell.

Subsequently to my last visit to her she had been

afflicted with hysteric fits, which frequently returned every day; but which were cured for nine months by a single blood-letting two years ago. Since that period she had been occasionally affected with them, and had been liable to headachs. For three months immediately preceding this visit, she had been troubled with almost constant vertigo.

In the month of September, 1813, Miss V. again called on me. After sitting some time her pulse was 96, regular, and soft. From the time of my last visit, she had suffered no return of hysterics; but her breath had been for some time worse; and her colour, after exercise, more livid. Her menses had been regular, but of a very dark purple hue; and her blood, when accidentally she had cut or scratched herself, was often observed to be of the same colour. Bowels open.

She was desired to lose eight ounces of blood.

Blue Child.—Master O., aged two years and a half, from his birth had blue or livid epithelion and extremities, with difficulty of breathing. Is generally cold. His belly is large, and usually costive; his frame small, his head not closed. For two months past he has had a cough, supposed to be whooping-cough. Is generally feverish and restless towards night; and after unusual fits of this kind, often has large oblong livid patches, apparently from merely distended vessels, of an inch or two in length, and an inch in breadth, not ecchymoses, suddenly coming out on his cheeks and neck, and disappearing again in a day or two. Cannot walk; but talks much like other children of

the same age. Any exertion greatly increases the dyspnœa and livor. P. 140, and upwards. R. 60. Urine turbid.

A Blue Boy.—Nov. 14, 1798. Master H. B., aged sixteen, red-haired, small of his age, but forward as to puberty, and with a rather deep voice, has had from his birth that particular appearance of the skin which is called blueness, so that the whites of his eyes have the red vessels of that tinge. His spirits are generally low; he is apt to be thirsty, and his appetite is always bad. There is constantly a hard beating of his heart. While at rest, his pulse is now 96, and somewhat irregular; his respiration 28. On motion, pulse 94, fuller, and more irregular. He has no difficulty of lying down, or any cough, and sleeps well during the night, but has no disposition of that kind during the day. He is free from pain in the bowels, but is occasionally affected with pain from the shoulders to the middle of the humeri. He is apt to be thirsty, and his tongue is considerably furred and dry; but his urine is natural in colour and quantity.

Five or six months ago he was in great danger from obstruction in his bowels, accompanied with great pain in them and round his knees, and was relieved only by a free use of aperients and opiates. Bowels now open. He has no indigestion.

Dec. 5. Pulse 90, while at rest. On walking up stairs, 84, but labouring and irregular.

Of this case I have never learned the result.

An extraordinary Hiccup.—June, 1791. A young man, aged eighteen, of a spare habit, about ten weeks

ago was seized with an hiccup, after riding six miles on horseback, immediately after he had eaten his dinner: the hiccup continued a fortnight, and was succeeded by a spontaneous noise, something similar to that which an hen makes when suddenly laid hold of, attended with a twisting of his mouth to the left side. This squall continues constantly when he is in an erect posture; but ceases entirely when in an incumbent one. He feels, when in an erect posture, a pain on each side, about the part where the diaphragm is attached to the ribs, and when lying down, a pain at the bottom of the sternum, which is more acute than the pain in his sides. Pulse 66, the squall 40 times, in a minute; appetite good; body regular; sleeps well. Has used a great variety of medicines without relief.

July 25. The squall still continues, and does not cease when he is in an incumbent posture, unless when he sleeps, the squall 25 times in a minute; pulse 68. He took, a few nights ago, two grains of opium at a dose, which deprived him of his usual sleep, and the squall continued the whole of the night, and from that time has constantly done so in every posture, except when he sleeps.

Sept. 13. Squall 20 times in a minute. About a fortnight ago, when he was taking the extract of Hemlock, in the quantity of three drachms a day, he often for the space of a quarter of an hour, or twenty minutes, ceased squalling; but though he continued taking the Hemlock in the same quantities, till within a day or two, the complaint is returned with as much

violence as ever. He feels pain now only in the left side, which remains the same in every posture.

He remained in the Gloucester Infirmary for some time after the last report, and then was discharged at his own request without being at all benefited. He has not been heard of since.

DISEASES OF THE HEART.

Enlargement of the Thyroid Gland in connection with Enlargement or Palpitation of the Heart.—

Case I.—There is one malady which I have in five cases seen coincident with what appeared to be enlargement of the heart, and which, so far as I know, has not been noticed, in that connection, by medical writers. The malady to which I allude is enlargement of the thyroid-gland.

The first case of this coincidence which I witnessed was that of Grace B., a married woman, aged thirty-seven, in the month of August, 1786. Six years before this period she caught cold in lying-in, and for a month suffered under a very acute rheumatic fever; subsequently to which, she became subject to more or less of palpitation of the heart, very much augmented by bodily exercise, and gradually increasing in force and frequency till my attendance, when it was so vehement, that each systole of the heart shook the whole thorax. Her pulse was 156 in a minute, very full and hard, alike in both wrists, irregular as to

strength, and intermitting at least once in six beats. She had no cough, tendency to fainting, or blueness of the skin, but had twice or thrice been seized in the night with a sense of constriction and difficulty of breathing, which was attended with a spitting of a small quantity of blood. She described herself also as having frequent and violent stitches of pain about the lower part of the sternum.

About three months after lying-in, while she was suckling her child, a lump of about the size of a walnut was perceived on the right side of her neck. This continued to enlarge till the period of my attendance, when it occupied both sides of her neck, so as to have reached an enormous size, projecting forwards before the margin of the lower jaw. The part swelled was the thyroid gland. The carotid arteries on each side were greatly distended ; the eyes were protruded from their sockets, and the countenance exhibited an appearance of agitation and distress, especially on any muscular exertion, which I have rarely seen equalled. She suffered no pain in her head, but was frequently affected with giddiness.

For three weeks she had experienced a considerable degree of loss of appetite and thirst, and for a week had œdematous swelling of her legs and thighs, attended with very deficient urine, which was high coloured, and deposited a sediment. Until the commencement of the anasarca swellings, she had long suffered night sweats, which totally disappeared as the swellings occurred. She was frequently sick in the morning, and often threw up fluid tinged with bile.

She nursed for a year the child of her first lying-in, during which time she did not menstruate. Subsequently to that period she had five times miscarried; and for the last four months her menses had been irregular as to intervals, and defective in quantity and colour. Bowels usually lax, and more especially so for the last three weeks. It was directed that six ounces of blood should be taken from her arm, and that she should take twice a day a pill consisting of dried Squill, and quicksilver triturated with Manna, of each one grain.

The bleeding almost immediately relieved the dyspnoea and stitches across the sternum. But the œdematous swellings were increased, and the urine did not exceed half a pint in twenty-four hours. She had been purged seven or eight times each day. Her pulse was 114, full and hard, and never more than six strokes without intermission. This was the state of symptoms on the 16th of August. The bleeding was ordered to be repeated, and the pills to be continued.

I did not again see her till the 25th, when she had taken eight of the pills, which did not affect the mouth, but had produced seven or eight watery stools daily. The urine, however, did not amount to three ounces in the twenty-four hours, and was very high coloured, and extremely turbid on standing, with a copious sediment. Her drink was about a quart in the day. Each systole of the heart shook the whole trunk of the body. The œdema had extended itself nearly to the navel.

The pills were repeated, and she was ordered to drink freely of a solution of supertartrate of Potash.

From this time no farther application was made to me respecting this patient, who, probably, soon paid her debt to nature.

Case 2.—Aug. 22, 1803. Elizabeth S., aged twenty-one, was thrown out of a wheel chair in coming fast down hill, 28th of April last, and very much frightened, though not much hurt. From this time she has been subject to palpitation of the heart, and various nervous affections. About a fortnight after this period she began to observe a swelling of the thyroid gland, which has since varied at different times, so as to be once or twice nearly gone. It is now swelled on both sides, but more especially the right, without pain or soreness on pressure. The pulsation of the carotids is very strong and full on both sides; but evidently in the greatest degree on the right. Menses regular; and bowels uniformly open. She voluntarily tells me that she used to be very subject to headachs, which have ceased ever since the commencement of these swellings. Pulse 96, small, hard, and regular.—Mitt' Sanguis è Brachio ad $\frac{3}{4}$ x.

Her head was much relieved by the blood-letting, and the swelling of the thyroid gland was evidently diminished.

On the 25th, she was ordered to take thrice a day a teaspoonful of a mixture of Tincture of Digitalis thirty drops, Syrup of Squills an ounce and a half.

Aug. 31. The medicine made her sick on the second day, but she has continued it ever since without the same effect. Her bowels have been regularly purged once or twice a day, but the palpitation of the

heart has been frequent, especially on exercise, which much fatigues her. Swelling of the thyroid, and beating of the carotids, much as before. Pulse 96. Mitt^r Sanguis ad 3x.—Pergat in usu Syrupi, 4^{ter} in die.

Sept. 7. Bowels open. No sickness. Palpitation somewhat better. Swellings nearly as before, that on the right being still the largest, and the pulsation of the carotid on that side the greatest.—Pergat.

Sept. 14. All complaints nearly gone. Bowels open without sickness. Pulse about 72, and slightly irregular as to the force of the strokes. Pulsation of the carotids still too strong. Swellings lessened. Menses adsunt.—Pergat in usu Syrupi.

Sept. 24. Yesterday morning she was seized with giddiness and sickness without vomiting. Bowels open yesterday, and frequently to-day. On the 14th ultimo, she was menstruating, and continued to do so for three or four days, during which the swelling of the thyroid almost disappeared; but has since returned, and the beating of the carotid is very strong. She has at this time some catarrh with sore throat.—Pergat in usu Syrupi.

Oct. 1. The symptoms of catarrh are gone; and the swellings are again very much lessened, though the pulsation of the carotids, especially the right, is still too strong. That of the heart, on exercise, is much diminished. Two stools daily, less loose than before.—Pergat in usu Syrupi cum Tincturæ Digitalis 3j.

Oct. 5. Beatings continue less. Swellings as

before. Bowels open. Omittatur Syrupus.—Let the part be frequently washed with lukewarm salt and water.

Oct. 12. Last week, previously to menstruation, the swelling much increased ; but when the menses appeared, it diminished, and continues to be so. Palpitation of the heart on exercise lessened ; but the beating of the right carotid is still preternaturally strong.—Syrupi ultimo præscripti sumat ʒj. 4^{ter} indies.

Oct. 19. Swelling softer and less than it has before been. Pulsation of the right carotid still strong and bounding. Two or three motions daily. Pulse 108, and soft. Feet cold.

Case 3.—Mrs. K., aged about fifty, a very thin woman, had for many years laboured under violent and often irregular action of the heart, accompanied with more or less of shortness and difficulty of respiration. During several aggravations of this disease I attended her, and found her heart violently palpitating, so as to reach 136 beats in a minute ; extending its throbbing both downwards and on the right of the thorax, far beyond the due limits, and swelling in a preternatural degree all the arteries which were capable of being felt, and more especially the carotids. The pulse was often unequal both as to frequency and strength. The respiration was greatly hurried, and the head was affected with throbbing pains. The urine was often defective. All muscular exertion aggravated the symptoms, which were occasionally relieved by blood-letting, Squills, Digitalis, and aperients. Still, however, much of the malady con-

tinued, and I could never perceive that the pulse was reduced below 120 in a minute.

Mrs. K. was also long affected with an extremely large swelling of the thyroid gland, which began at a period, the relation of which to the commencement of the disorder of the heart, she was unable to recollect.

My last attendance on her was in June 1813; on the 24th of which, at eight in the morning, I was called to visit her, and found her in bed. Her pulse was 132 in a minute, and very full, hard, and strong, both in the radials and carotids. The beating of the heart extended all over the thorax, and even into the right hypochondrium. The respiration was 24 in a minute, with grunting expiration, and with no elevation of the diaphragm during inspiration. She had occasional cough, with yellowish brown mucous expectoration. The thyroideal swellings projected before the carotids, and involved the sterno-mastoid muscles from their lower insertion to nearly two-thirds of their length upwards. The carotids were driven somewhat forwards, and much enlarged; and the external jugulars were swelled and prominent. For about a fortnight she had been affected with an œdematous swelling of her legs, which had gradually increased. The abdomen was also tense, but not fluctuating, and she suffered considerable pain about the navel, where there was soreness on pressure. The bowels had however been open during the night, with griping. The quantity of urine had not exceeded a teacup full in the last forty-eight hours. Some medi-

cines were given, which it is needless to specify, as the patient died at five o'clock the next morning. A dissection was not permitted.

Case 4.—A woman servant, unmarried, and about thirty years of age, whom, during a space of several months, I had at various times seen labouring under a palpitation of the heart, which always more or less existed, and was accompanied with a very quick and irregular pulse, great hurry in breathing on any exertion, and an extremely strong beating of the carotid arteries, began at length to have enlargement of the thyroid gland, which had not existed more than a fortnight, when I last saw her, and which was much increased from the time when it was first noticed.

Case 5.—During my attendance on this patient, I was consulted by a married Lady, of about forty years of age, from the North of England, who was supposed to be in a consumption. She had in fact a very quick pulse, with great shortness and difficulty of breathing, and frequent cough, attended with copious expectoration. She had also an extremely large swelling of the thyroid gland on each side of the neck, with a considerable dilatation of the carotid arteries. The cough having been removed in about a fortnight by blood-letting, Squills, and Citrate of Potash, which were ordered when she first consulted me, I had an opportunity of discovering, at my second visit, that she was afflicted with a most laborious action of the heart, which, from the extent of the pulsation, seemed much enlarged, and suffered a

great aggravation of symptoms from any muscular exertion.

This inordinate action of the heart had been of long duration, and considerably preceded the commencement of the thyroideal swelling.

The patient did not remain at Bath long enough for me to know the result of the disease, which, doubtless, would ultimately prove fatal.

My attendance on the three last patients having occurred at the same time, first suggested to me the notion of some connection between the malady of the heart and the bronchocele. I mentioned that opinion to Mr. G. Norman, surgeon, to whom I shewed the lady last mentioned. Shortly afterwards I expressed the same opinion to Mr. Cruttwell, surgeon, to whom it then occurred that he was attending a patient with a similar coincidence, and that in her the bronchocele succeeded to the affection of the heart.

Case 6.—Anne P., aged about thirty, a married woman, thin, and with a very long neck, who has never had a family, five years ago, at Christmas, when affected with chilblains, for their relief kept her feet in cold water for a quarter of an hour, which made her feet extremely cold. Half an hour afterwards she was seized with a pain about the region of the heart, which was extremely violent; but unaccompanied with cough, fever, or palpitation. Ever since that period she has been subject to attacks of similar pain, which recur frequently. She has also frequent palpitations, which come on more especially after walking or any

hurry ; though sometimes without any apparent cause whatever. She is often affected also with oppression of breathing, which is sometimes accompanied with globus hystericus, and obliges her to lie rather high in bed. All pressure about the thorax is uneasy to her ; but she lies best on her left side. She is free from cough. At this moment she complains of violent pain on the sternum towards the lower part, which is not sore on pressure. Pulse 112, and weak. Respiration 22. Extremities cold. Skin pale. She is sleepy during the day, but sleeps little at night. Tongue rather furred. Appetite irregular. Urine very various as to appearance. Menses, since the commencement of the malady, defective.

During the palpitation, and indeed at other times, she has long had a violent beating in her head, and a throbbing in her neck. This day fortnight she had an unusual degree of this throbbing, accompanied with a great aggravation of a distracting pain in the head, to which she has been subject ever since she began to be ill, and which is always greatly increased by coming out of the air into a warm room. During the more violent accessions of this affection of the head, she cannot bear the least conversation, and feels as if she should die. The evening after the last described aggravation, the thyroid gland began to swell at its lower part before, and the swelling has now diffused itself to a considerable degree on each side, without soreness on pressure. The beating of the carotids is very strong.

For a year past she has often parted with pieces of tape-worm, of various lengths, some at least a yard. Bowels generally costive.

She has tried various remedies for all her maladies, except the swelled thyroid gland.—Vs. ad 3xii.

Nov. 10. The bleeding, for three or four days, greatly relieved her. It exhibited no inflammatory crust; but, in consequence of her having fainted, ten ounces only were taken away. Since this operation, the thyroid gland is reduced nearly one half. Pulse 144, and weak, on her coming up stairs. Bowels constantly purged, and tænia has continued to come away.—Vs. ad 3viii.

Nov. 14. The blood is reported to have a considerable degree of inflammatory crust. The swelling is still farther diminished, and all the symptoms are much abated. Pulse 100, soft, and regular. Costive.

R Aloës Barbadosis.

Scillæ exsic. āā ʒj.

Syrupi q. s. sit. Ft. Pilulæ xx æquales. Sumat unam ter die.

Dec. 7. Her bowels have not been sufficiently open, though she has taken purging Salts every morning. She has discontinued the Pills, fancying that they have produced pain in her stomach and bowels. Ever since yesterday, she has had constant pain in her head and back, and also in her left side about the region of the heart, especially when she moves. Previously to that time she was better. She makes daily from a pint to a pint and a half of high coloured urine. Pulse 104, weak, and regular. Neck much

reduced in size.—*Pergat in usu Salis aperientis.*—*Desistat ab usu Pilularum.*

March 4, 1814. She has continually kept her bowels open by means of the Salts; and till within these six weeks has taken, thrice a day, a pill ordered since the last report, and consisting of dried Squill ʒss. Barbadoes Aloes ʒss. divided into xx pills.

Till within this fortnight she has been much better; but, ever since that period, her breath has been very short, especially on going up hill or up stairs, and she has had a great deal of palpitation and irregular action of the heart, on any exertion; after which, if she is within doors, she is obliged to go to an open window for breath. She complains also of a beating exactly in the scrobiculus cordis, in consequence of exercise; which beating is perceptible to the touch. Pulse 116, now while at rest, and somewhat unequal in the strength of the strokes. The pulsation is perceptible by me on the outside of her clothes, considerably below the proper seat of the heart. Pulse of the carotids very strong. Swelling of the thyroid gland larger than it was, and there is a good deal of pain high up on the right side, in contact with the carotid, especially when she swallows. Her left leg and foot are in some degree œdematous, especially at night. A pint or more of urine daily, varying in colour. Bowels bound.—*Mitt' Sanguis è Brachio ad ʒx.*—*Pergat in usu Pilularum ultimo præscriptarum.*

March 19. She was very faint from the bleeding; and has continued the pills, which have purged her thrice a day. Pulse 120, weak, and somewhat un-

equal. Respiration 20. For a week past she has had a cough without expectoration, or coryza. Countenance and hands livid, and extremities cold. Thyroideal swelling very much diminished, and more soft, since the bleeding; and pain of the right side of the throat gone. The strength of pulsation in the carotids is greatly reduced. She complains of considerable pain about the heart, which is lessened by lying down, and of great soreness on pressure about the scrobiculus cordis. Quantity of urine not ascertained. Legs and feet less swelled than at last report.—*Pergat sumere Pilulas jam præscriptas.*

March 22. She has had two or three loose motions daily. The cough continues, with considerable expectoration in the morning. The pains of the thorax and scrobiculus cordis continue. Pulse 120, weak, and unequal. Respiration 18, from the thorax only, though sometimes assisted by the supra scapular muscles, and irregular as to period and depth. Urine from a pint to a pint and a half daily, and, as she tells me, clear. Swelling as before.—*Pergat in usu Pilularum.*

March 25. On examining the thorax and abdomen, I find a great pulsation not only about the proper region of the heart, but also considerably below the point of the ribs on the left side, between that spot and the navel; and the part affected is extremely sore on pressure, though there is no swelling or other external appearance of disease.

April 1. Urine from three quarters of a pint to a pint and a half daily, high coloured, and somewhat

turbid. Palpitation for this week pass less than it was. Thyroideal swelling much diminished. Pulse 116, soft, and regular. Bowels open twice a day, but not without the pills.

Rep^r Pilulæ, ad^o Pil. Hydrargyri ʒj. Sum^t j ter die.

Case 7.—An unmarried Lady, aged fifty, who had been at various times subject to palpitation of the heart, observed by accident a swelling of the thyroid gland on the left side, about two years before I first visited her; she was not able to recollect whether the swelling or the palpitation first occurred. For the former, various remedies were for a short time employed; and at an unassignable period afterwards, she began to suffer pain in her legs, ankles, and feet, occasionally attended with some œdema of the latter part; and from this period, if not before, the swelling ceased to increase. When I examined it in the month of March 1814, it was not in the smallest degree sore to the touch. Her pulse was uniformly quick, amounting habitually to 100 in a minute, and being very strong in the carotids, more especially the left. Her appetite was good, and her tongue clean, and her skin cool.

Case 8.—Miss. P., of a gouty and nervous family, has had an enlargement of the thyroid gland for more than twenty years, which has very much increased of late. It commenced at sixteen years, after having been two years tolerably regular, but leading a sedentary life. It is not sore, but occasionally somewhat uneasy. She has no previous headach or giddiness, but frequent palpitation of the heart, sudden, and

violent. She is regular copiously, with no difference at these times.

Eight or nine years ago a pain came on in the right foot, across the small joints of the toes, with swelling, redness, and tenderness, continuing for five or six weeks, and becoming of a dark livid colour; impeding her walking for a considerable time, without breach of the skin. From that period she has been subject to depression of spirits, and frequent headach, especially of late. The swelling began on the right side, and is now nearly equal on the left, but extending far upwards. Pulse 96, and soft. Carotids of moderate strength; the right, strongest. Palpitation less of late, but violent. Bowels tending to costiveness. Extremely nervous. She has taken Bark, Sponge, Calomel, Antimony, Sarsaparilla, Soda, has tried sea bathing, and used Mercurial friction, which made her faint. Vs. ad ʒviii . Aloës Barbad. gr. j. vel iss. h. r. n. Extr. Conii, q. s. ad nauseam ciendam.

The blood was not inflamed. A fortnight afterwards, the patient, who lives at a distance, says in a letter, "That the tightness and uneasiness in the "swelled part are quite removed, but I cannot be "certain the size is reduced. I have taken much "exercise, and feel altogether improved by your "remedies.—May 12, 1814."

Bronchocele, with Affections of the Head.—Case 1.
—A female of advanced age, mother of several children, apparently of weak intellects, and, as it was said, of a very fretful and captious temper, subject to headachs, and scarcely ever sleeping, began to be

affected with bronchocele before the cessation of the menstrual discharge, and afterwards suffered a slow, but gradual increase of the malady. She had no affection of the heart, and her health was otherwise good. The symptoms of determination to the head, above mentioned, were capable of alleviation only from blood-letting and purging. The pulsation of the carotids was always too strong.

Case 2.—A Lady, upwards of fifty years of age, for more than twenty years subject to a great variety of complaints denominated nervous, and among the rest to epilepsy, of which she has had at least five hundred fits, began, soon after the commencement of these maladies, to be affected with enlargement of the thyroid gland, which has gradually increased to a considerable extent. It has been constantly remarked by her that a sense of fulness and most conspicuous enlargement of that part takes place some days before the paroxysm, shortly after which the swelling diminishes, and is reduced nearly to the previous size. The pulse is usually at least 96 in a minute; and that of the carotids preternaturally strong. There was no evidence of mal-organization of the heart.

Case 3.—Miss C., aged thirty-five, thin, and of middle height, at the time of her consulting me on the 20th of April, 1814, had been for twenty-four years subject to epileptic fits, which for several years had occurred about every eight days, almost universally seizing her in the night, when she often had two attacks. They excited no consciousness; but their frequent recurrence had produced some loss of

memory, together with occasional mental alienation. Her appetite was great ; her strength little impaired, and her stools and catamenia were regular.

Some time about the year 1808, she began to perceive an external swelling in the neck, which, when I saw her, was an evident enlargement of the thyroid gland, which had considerably increased, and affected both sides of the throat, without soreness or any other inconvenience.

Case 4.—In Mr. E., a glandular enlargement, and inflammation in the neck, was always attended with vertigo, and sometimes with deafness. The pulsation of the carotids was very strong, and in evidence that this was not the effect of local glandular pressure on the carotids or jugular veins, the effect was just the same when the diseased gland was reduced in size.

Case 5.—Jane C. began to have nervous headach in May 1814, and at the same time the thyroid gland began to enlarge. She is regular, but has had ovarian swelling for two years. [June 22, 1814.]

Enlargements of the thyroid gland are not uncommon in females about the period when the body is fully formed, and the menses are in a sort of wavering state. After both these points are completely established they generally disappear, if the health is otherwise good ; and this event occurs under such different modes of medical treatment, that I have often doubted whether those modes contribute much to the effect.

It is indeed true that these swellings occur most often, and in the greatest degree in young females, who

have led sedentary lives, and who are of what are called relaxed and nervous habits ; in which, according to the principles which I have already endeavoured to establish, there is a propensity to morbid determinations of blood, more especially to the head. Much the worst cases of the kind which I have seen at that age, have been those so accompanied ; and in more than one of these, the affection of the head has amounted almost to madness.

As the determination to the head in these cases has been removed, either by evacuants, by bodily exercise, or by the spontaneous salutary changes in the constitution, the bronchocele has also ceased.

I do not deny that in some examples of this kind the patient has remained subject to the determination to the head, even after the bronchocele has disappeared ; nor is there any reason why this should not happen, unless the bronchocele were the cause of the determination, which is not presumed. On the other hand, cases of bronchocele have been observed to occur in the Valais, as above remarked, and also in England, without any conspicuous symptoms of too great determination to the brain.

Still, however, the coincidence is so frequent and remarkable, that one can scarcely avoid suspecting that the thyroid gland, of which no use whatever has hitherto been hinted at by physiologists, is intended in part to serve as a diverticulum in order to avert from the brain a part of the blood, which, urged with too great force by various causes, might disorder or destroy the functions of that important organ.

This notion, however, I offer merely as a conjecture, which future observation may either establish or annul.

Disease of the Heart and Stomach.—The Rev. E. F., aged sixty, a strong built man, square, and above the middle size, had originally a good constitution, and was always temperate ; but, being a very zealous Minister of the Gospel, much addicted to study, led a very sedentary life, in consequence of which he became corpulent.

On Dec. 10th, 1799, after having been exposed to cold and wet, he was seized with excruciating pain about the middle of the sternum, accompanied with shortness of breath, so as to be obliged to sit up in bed. The pain occupied a space of about four inches square ; and did not extend itself into either of his arms, nor was the part sore to the touch. The disorder was not preceded by shivering, or accompanied with cough, or any very observable excess of heat, thirst, or dryness of tongue. The pulse was quick, but never exceeded 96 in a minute. He had no flatulency, heartburn, or any other symptom of dyspepsia.

His bowels being somewhat constipated, his surgeon gave him a gentle aperient ; and as soon as it had operated, a draught, with twenty-five drops of Laudanum, and some Sulphuric Æther, which procured ease till the next day, when the complaint being aggravated, the draught was repeated, and a plaster of Opium mixed with Camphor and Gum-resins was applied to the thorax. These remedies afforded some

alleviation, but did not remove the complaint, which suffered occasional aggravations during the day, but always greatly increased between ten and eleven at night, so as to oblige him to sit erect, for about an hour and a half; after which he could lie down as he was accustomed to do, on two pillows, and, as far as I am able to learn, equally well on both sides and on his back. In this manner the pain and shortness of respiration continued, with a nightly exacerbation, confining him to his room, but alleviated by the same remedies, and gradually declining for three or four weeks, when he recovered a tolerable share of health. He was still, however, occasionally subject to slight attacks of a similar kind, which were not produced by walking, but were disposed to recur from mental agitation.

In the year 1806, he had a slight fit of the gout, and two or three subsequently, of which the last was sometime during the winter of 1807. Each fit prevented his walking out for about a week, though it did not disable him from slow walking within doors.

In the winter of 1807, he was seized with a violent cold and cough, in which he occasionally complained of some pain in his breast; and in his sleep he was sometimes affected with a noise in his throat, and a hard and laborious breathing, which waked him, and obliged him to sit up in bed. The cough ended with a copious thick expectoration of mucus without blood, and never returned. From that time, however, Mr. F. became unable to lie on his left side, or comfortably on his right; and was obliged to add to the pillows on

which he before slept, so as from about the end of July to require four, besides the bolster. He also once or twice complained of palpitation of the heart, and was not able to walk much without great fatigue and disposition to faintness.

Continuing in this manner to decline, and losing his appetite, he was advised to take a journey on horseback; which he did in the months of June and July 1808, and returned home greatly emaciated and exhausted; which was attributed to the fatigue of the journey and extreme heat of the weather.

On the 27th of July he sent for Mr. Ormond, who found him complaining of weakness of the stomach, loss of appetite, an acid taste in his mouth, and a vomiting of the greater part of his food. Both then, however, and at all subsequent times, he denied having any pain in his stomach. His tongue was moist, and his pulse 96 in a minute.

The complaint in the stomach, and consequent emaciation and debility, proceeded with increasing violence, and he came for relief to Bath, where I first visited him on the 20th of September, 1808. He then laboured under much fever, and, for the present, I ordered him some aperient and stomachic medicines. His bowels were difficultly moved, and his stools somewhat browner than natural. His urine was in good quantity, of the usual colour, and free from sediment. He had vomited once or twice what appeared to be merely his food in a state of solution, and of no uncommon smell. On examining the epigastrium, I observed soreness and pain on pressure, with some

degree of hardness, more especially on the right side, extending below the cartilages of the ribs, as he lay with his head much raised.

September 27. Six A. M. Ever since the night of the 24th, he has each night had fits of difficulty of breathing, which have chiefly increased about half-past one o'clock in the morning, and have continued for two or three hours, preventing him from lying down, and indeed obliging him to get out of bed. He is now sitting on a sofa; complains of unspeakable pain and tightness across his breast; and is unable to make an inspiration deeper than in his present usual breathing, which is thus performed. The posture most favourable is that of sitting, with the trunk of the body erect, and the head somewhat thrown back; and after a short and shallow inspiration, he rests for an instant before the commencement of the next expiration, and then expels the breath with a short sonorous catch or grunt. In inspiration he raises the ribs, but little, if at all, the shoulders; and at the same time depresses the diaphragm, most, I think, on the left side. Pressure immediately below the true ribs, especially on the left, produces intolerable anxiety and suffocation. Pulse 96, full, and tolerably regular. Respiration 44. Hands rather hot. Feet warm. Face pale. Tongue dry and furred. Urine, since two P. M. yesterday, about a pint, rather pale, and clear. One stool to-day. He has vomited, and brought up, with much straining, a draught administered by his apothecary, but no food. Some swelling began last night in his feet, and now occupies the legs nearly up to the

knees, being pale and of the œdematous kind. Ad-moveatur pectori Emplastrum Cantharidis.

℞ Liquoris Potassæ Citratis.

Aquæ Menthæ piperitæ āā ʒiij.

Scillæ recentis ʒss.

Sacchari puriss. ʒij.

Tincturæ Opii guttas xl. M Sumat cochlearia duo ampla quâque horâ donec lenitus fuerit dolor.

Two P. M. His breathing became considerably easier after the first dose of the medicine; two doses have procured a great deal of sleep, though without enabling him to lie down. He has had no stool, has made about two table spoonfuls of pale urine, and within this half-hour has thrice vomited and brought up the fluid food which he had taken, mixed with a good deal of bile. Pulse 90. Respiration 32.

H. s.umat Mist. coch. duo ampla, et repetat quâque horâ urgente dyspnœâ.

Sept. 28. . Soon after my visit he went to bed, and supported by four or five pillows, slept well, and without dyspnœa. His breath is very easy and he can make a tolerably deep inspiration, though, as he says, with some resistance. While half asleep, he has had occasional catchings and twitchings of the legs; has made about a pint of clear and rather pale urine; has vomited frequently, and had no stool. Tongue tolerably moist and clean. He has had no headach or giddiness, but appears rather slow in his mental faculties. Pulse 90. Respiration 16,

Sept. 29. Four P. M. He has slept tolerably well,

supported as before, lying most easily on his back; next on the right side, and worst on the left. He is free from sense of pain or weight about the chest. Hands cold, and approaching to livid. Tongue clean and moist. He has frequently vomited, but if he takes very little fluid food at once, it remains, in part, on his stomach. Swelling of the legs much increased. Urine a pint, and rather pale. He has had occasional catchings of his arms. Pulse 128, weak, and rather irregular. Respiration 18. On walking a few steps, pulse 142, and much more obscure. Respiration at first not apparently affected; but after creeping about for half a minute, he complained that his breath was becoming bad.

℞ Hydrargyri purificati.

Mannæ āā ʒj. Contritis donec globuli visum fugerint, adde,

Scillæ exsiccatae ʒss. ut ft. massa, in Pilulas xx. æquales dividenda. Sumt. unam meridiem et horâ somni quotidie.

Sept. 30. One P. M. He has had a tolerable night. He has had no motion, and vomited frequently. Skin rather cold. Urine only six ounces, pale and clear. He has no headach, but considerable weakness of intellect, with something of wildness in his manner. Pulse 128, small and regular; on walking slowly, 128 and irregular. His breath does not seem affected by the exertion.—Pergat.

October 1. He has had no motion; has had a good night; is free from pain or giddiness in his head, but failing in recollection. He has been fre-

quently sick. Urine three quarters of a pint, clear, and rather pale. Pulse 90, and regular. Sumat Pilulas aperientes tres. h. s., et cras primo mane.

Oct. 2. Half-past twelve P. M. During the night he was free from difficulty of breathing, but restless, occasionally wandering in his mind, and troubled with catchings of his hands, which continue. He is drowsy, slow of apprehension, and frequently repeating the same words. He had formerly occasional small discharges of blood from the nose, and these have returned for the last two days. He has had no stool from six pills, but has frequently vomited. Œdema of the legs as before. Urine less than half a pint, and pale. Tongue without fur, but rather dry. Pulse 128; rather contracted and hard, but regular. Respiration 14.—Sumat Pilulas aperientes tres statim, et 4^{ta} quâque horâ donec dimiserit venter.

Oct. 3. Four P. M. He had a motion from the pills; passed a very restless night, starting frequently, not lying down long together, and suffering some mental alienation. The twitchings continue. His breathing is tolerably good. His legs rather less swelled. Urine three-quarters of a pint; somewhat higher coloured than before. Tongue very dry. He has had occasional hiccup, and has vomited a good deal, but only undigested food, with a strong tinge of yellow bile. His nose has at times discharged a little blood. He complains of no affection of his head; and the pupils are not dilated; notwithstanding which, he appears to suffer some obfuscation of vision, and says that he wants a candle. There is a violent

beating and hardness of the carotid arteries. Pulse 128 and irregular, but tolerably full. Hands livid and rather cold.—*Sumat Pilulas aperientes tres hac nocte h. s. Admoveantur temporibus hirudines iv.*

Oct. 4. Half-past eleven P. M. He is, for the first time that I have seen him, lying in bed, on his back, supported by four or five small pillows. The leeches drew tolerably well ; but he has had no stool.—*Sumat Pilulas aperientes tres 4^{ta} quâque horâ donec alvum duxerint.*

Oct. 5. Four P. M. He had three motions in the night ; and at times a great deal of stupor and wandering of mind. What he has thrown up has been as usual, only his food in a state of solution, with mucus, and, occasionally, fresh bile ; with no bad smell, except now and then that of sourness. He has never had heartburn, or found fruit or other acescents disagree with him. Tongue extremely dry and parched. His nose had bled, but not much. Hands warm and not livid. The twitching in them has increased, and there is some subsultus of the tendons. Pulse in the radial 116 and weak ; in the carotids extremely strong. Respiration 15, and free. Urine above a pint, besides that with the motions ; and pale.—*Sumat haustum è Potassa cum Succo Limonis inter effervescentiam, 4^{ta} quâque horâ.*

Oct. 6. Four P. M. He has not vomited ; had a bad night, with restlessness and mental wandering, but no dyspnœa. Twitchings much the same. No stool. Tongue tolerably moist. Very little urine. Pulse 108, and regular. Carotids less full.—*Persistat*

in usu Misturæ effervescentis.—H. s. sumat Pilulas aperientes tres.

Oct. 7. Half-past four P. M. He has refused all his medicines, and has had neither stool nor vomiting, but occasional straining. His night was very restless; his recollection and consciousness are much diminished, he has considerable wandering of mind, and now and then dozes. No twitchings. Urine about a pint, pale and clear. Pulse 100, and regular. Carotid much less full.—Sumat statim Pilulas aperientes tres.

Oct. 8. Three P. M. He refused to take his pills, and has had no stool; but for two days has had a considerable discharge of sanies and blood, supposed to be from piles, to which he had been subject. A good deal of clotted blood has also passed from his nose through his mouth. No vomiting, but constant straining. Tongue dry. Urine about a pint, clear, and of the natural colour. Only slight tremor of his hands. He is very delirious. Pulse 92, and soft. Breath good.

Oct. 9. He has been constantly restless, and averse to lying down; frequently straining, without vomiting. From one o'clock in the morning he had twitchings and spasmodic contractions of his muscles; but was occasionally sensible till about a quarter past four, P. M. when he died.

He was opened at a quarter before nine, A. M. on the 10th of October.

Head. His hair had been for twenty years white. The scalp was strongly adhering to the cranium, and,

when separated from it was unusually dry. The dura mater also adhered so firmly to the inside of the cranium, as not to be detached from it without great force and considerable lacerations, which, however, poured out no blood. There was a good deal of serous fluid between the arachnoides, and pia mater, dipping down into the sinuosities. In the sliced brain there was no disease, except somewhat more of fluid than usual. No fluid was in the right lateral ventricle; in the left, about two drachms. In both, but more especially the left, the choroid plexus was bounded by a mass of small hydatids turgid with transparent fluid. A considerable quantity of fluid was found on the tentorium, and on the base of the skull. The cerebrum and cerebellum, with regard both to their vessels and every other part of their structure, were in a healthy state.

Thorax. In the right side there were nearly two pints of transparent fluid; but none in the left. The lungs were in a sound state, no where adhering, but full of air. The heart was full twice the natural size. The pericardium, which was extremely fat, adhered to the heart by at least two-thirds of its surface, chiefly towards the base; on the anterior part loosely, on the posterior, in which the adhesion extended in patches to the apex, more firmly, so as not to be separable without slightly lacerating the heart. The adhesion was occasioned by the intervention of a crust of coagulated lymph about as thick as a crown-piece, which, on raising the pericardium, seemed to be attached by innumerable small fibres to the surfaces which it con-

nected. There was no where any mark of recent inflammation. In the pericardium there were about six ounces of yellowish transparent fluid. The heart was every where of a dark colour, strong and firm; the parietes of the left ventricle being full an inch in thickness. In the right auricle there was a very large and firm polypose concretion; and a smaller and less firm in the left ventricle. The left or posterior coronary artery, at about half an inch from its rise from the aorta, was become cartilaginous, and so reduced in diameter, as not to admit the end of a small probe, feeling to the touch like solid catgut. This state extended about an inch and a half; after which the artery was of the usual degree of softness, but smaller than natural. The right or anterior coronary had its coats unusually hard; but was completely pervious, and full twice as large as the other. All the valves and cavities were in a healthy state. The aorta was large in proportion to the left ventricle, but firm in its substance, and free from ossification.

Abdomen. All the viscera were greatly loaded with fat; the liver and spleen perfectly healthy; the gall bladder full of bile, and free from concretions; the pancreas somewhat harder than natural. The stomach was preternaturally small, especially in the cardiac portion. The whole of the villous coat was somewhat thickened, and of a dark purplish red colour, in many parts amounting to actual blackness. This appearance ceased near the cardia, but extended, in a faint degree, through the pylorus, an inch or more into the duodenum. This colour, on being examined

with a weak lens, was found to arise from the blood stagnating in the whole of the vascular substance, and affording a depth of shade proportioned to the approximation and fulness of the vessels. Altogether, the villous coat had the appearance of an unusually dark coloured spleen, or of the intestine long strangulated in a hernia. None of these vessels had burst into the cavity of the stomach, though there were one or two minute bladders on different parts of the surface. The more depending part of the cavity of the stomach was besmeared with a small quantity of a greyish fluid, of the consistence of thick water-gruel. The intestines were in a natural state. The right kidney was smaller than usual. The left was healthy in its substance, but at its upper end was found, when opened, as if suddenly truncated; its membranes being continued on so as to form a sack, containing half a pint of fluid of a urinous smell and appearance. The bladder was full of urine.

The muscles were of a dark red colour; the cellular membrane every where sufficiently abounding with fat. It was throughout altogether free from œdema.

Disease of Heart and Aorta, with Dissection.—Nov. 13, 1812. Mrs. W., aged sixty-two, short, rather fat, and of a pale complexion, a widow nearly a year, during the former part of her life subject to occasional attacks of complaints, vaguely denominated bilious, has for the last twenty years enjoyed good health, exclusively of two paroxysms of severe, but short, gouty inflammation in her foot, sixteen and

two years ago, and of the malady which I am about to describe.

Seven years ago, on going up hill, she began to feel a pain across the middle of the sternum, not then darting into either shoulder or arm, and which went off immediately on her resting. This sensation has continued to recur very frequently till the present time. It never occurs from going up stairs, or walking ever so fast on plain ground, or from any other cause than walking up hill; and even then it is sometimes wanting. She has experienced more of it in the evening than in the morning. For five or six years the pain has extended down the back to the shoulder blades, and down the outside of the humeri to the elbows, but never to the hands. It is unaccompanied with palpitation of the heart, or any more of shortness of breathing than persons in health usually feel in walking up hill. The fit always goes off with a peculiarly deep inspiration. On the 7th of this month she had in the evening two attacks from walking up a very slight ascent, and in both was in some degree faint, and afterwards tremulous in her legs on standing up after resting. Pulse now 84, regular, and weak; but she tells me that it is frequently intermittent, even when she is at rest, and that it has been so as long as she can remember. Respiration 16, and very gentle. No beating of the heart to be felt. Pulsation of the left carotid rather strong. This statement of the pulse and respiration applies to the patient during my examination, while she is at rest. Appetite good, but not voracious.

She is free from flatulency, but is disposed to purging, having usually three or four motions daily. Sleeps well, and lies down equally on both sides or the back, and as low as other persons.

Let her avoid all spirits and fermented liquors, hot rooms, late hours, and strong exercise of every kind. Let all her meals be small, animal food eaten very sparingly, and walking, even on plain ground, be shunned soon after a meal; and let her feet and legs be warmly clothed.

R Scillæ exsiccatae.

Pulveris Rhæi.

Zinci Sulphatis āā ʒj.

Confectionis Rosæ caninae q. s. sit. Ft. Pilulæ
xx æquales. Sumat unam primo mane,
meridie, et horâ somni quotidie.

March 26, 1813. Her bowels have been much opened every day by the pills. She has had a good deal of palpitation on exercise, or lifting any weight, but has had no attack of the complaint for fifteen days. For two months she has had a cough, from cold, accompanied with some expectoration; and during the last fortnight has been much affected with a constant beating on both sides of her head. Pulse 96, and moderately soft, after coming up stairs.—
Pergat in usu Pilularum.

April 23. She has had occasional attacks of the complaint, though in a less degree than before my attendance on her. For the last month she has had no symptom of the disease, except an occasional palpitation of the heart, and a slight tendency, or, as

she expresses herself, a feeling of the complaint while walking. She has not wholly lost the cough which was produced by the cold caught three months ago. Eight days ago she was seized with gout in the ball of the left great toe, which was red, swelled, and painful, with fever, for four days; after which an œdematous swelling occurred in the ankle, and is not yet wholly gone. Bowels regularly open. Pulse 80, regular, and weak.—*Pergat uti remediis jam præscriptis.*

May 14. On the 6th, the ball of her left great toe began to be affected with gout, which increased very much the next day, and was accompanied with fever. There is still, at night, some swelling and redness of the affected part. During this attack she has been wholly free from cough till yesterday, when it returned in a slight degree. She has also had no return of the pains while at rest, and only slight attacks confined to the thorax, on walking. The beating of the heart on exercise is considerably lessened. Bowels as before. Pulse, immediately after walking up stairs, 116, and regular, with some coughing; after resting, 72, and occasionally intermittent. Respiration 18.—*Pergat in usu Pilularum et Regiminis.*

June 5. The gout has entirely left her for a fortnight past. On the 31st of May, she had for a short time a slight pain in her right groin, which was followed by a discharge of blood from the vagina, which continued twenty-four hours. Her menses have entirely ceased for seventeen years, and she has never since had any similar discharge. She has had occa-

sional palpitation of the heart, but less frequent than it used to occur ; and once in a week or ten days has experienced some pain in the chest, which has not extended into either arm. She has some cough and hoarseness with slight expectoration. Pulse, five minutes after coming up stairs, which hurried her breath, 84, regular and rather hard, her heart at the same time beating too strongly. Bowels regularly open.—Pergat.

July 12. She has continued her medicine regularly, and has never had sickness. She has taken much more exercise than for half a year before, and has had not the least return of complaint. Pulse 72, soft, but occasionally intermittent.—Pergat.

July 27. For this week past she has had considerably more pain of the chest from walking, so as to be obliged to stop, after which the pain has immediately left her. She has continued the use of the pills, and has had from four to seven loose motions daily. Sleeps well. Pulse 80 and weak, occasionally losing one stroke in six or seven. Respiration 10 or eleven, very gentle, and chiefly from the thorax. Tongue slightly furred. Appetite good. Bowels open.—Pergat in usu medicaminum.

August 1. She has continued the use of her medicines, and remained free from complaint till the 27th ult., when after having walked on plain ground more than usual, and having had some mental agitation, she was suddenly seized with a pain, passing through the chest to between the shoulders, and down each humerus to the elbow ; during which she was not sick, but

fell, lost her senses, and groaned a great deal. In this state she continued eight or nine minutes before she was able to speak; after which she recovered her usual feelings of health. Bowels constantly open three or four times a day. Pulse 80, regular, and of moderate strength. No cough.—*Pergat in usu Pilularum.*

September 12. Since last report she has had only one attack, which was on the 2d ultimo. It occurred while she was walking late at night, and though comparatively slight, was attended with great palpitation of the heart, pain across the thorax, stretching into the left arm, and some disposition to faintness. Bowels open four or five times daily. No cough. Pulse 80, weak, and regular.—*Pergat sumere Pilulas solitas.*

October 18. Her bowels have been opened by the pills three or four times a day. Three weeks ago, in consequence of an accident, her nose bled more than a pint; from which she became faint, but has found no subsequent inconvenience. She has had one or two slight returns of the complaint of her chest during walking, but has had no difficulty in going up stairs. Pulse 66, weak, and occasionally intermittent.—*Pergat sumere Pilulas.*

From this period, in consequence of a severe indisposition which confined me to my bed, I saw Mrs. W. no more; but the following account I obtained from a very intelligent relative, who was constantly with her.

On the 30th of December, she was seized with very acute gout in her right foot, followed by œde-

matous swelling, which extended up to the knee. These symptoms continued more or less as long as she lived; though, for two or three of the last days, the pain was much lessened, and the swelling nearly gone.

Previously to this malady, she had suffered very little from the constitutional disease, subsequently to my last interview with her; so that she was able to walk up fifty or sixty steps without inconvenience.

On the 6th of January, 1814, at midnight, after getting out of bed to pass urine, immediately after her return to bed she became affected with syncope, in which she was covered with a cold sweat, became completely insensible, and moaned a great deal. This state continued for about five minutes.

About the 10th, she was seized with a cough, which was not preceded by the common symptoms of catarrh, but continued frequently to recur, in long and violent fits, till her death. It does not appear to have been accompanied with expectoration or fever; and she could lie down low in bed, though, for two months before her death, not well on the left side. For about the same period, she had an almost constant pain in the right hip, which was not sore to the touch.

On the 13th of January, at the same hour, and after the same action as on the 6th, she had an attack of syncope, similar, but of longer duration.

On the 19th, about ten P. M. she had another paroxysm, not amounting to insensibility; which was followed by a much more violent one at midnight, which again occurred after her having returned into

bed, as before, but continued full half an hour. Neither of these four last attacks was preceded or followed by pain of the thorax; and each, for the time, completely removed the pain of the gout.

On the 22d, about one in the morning, after a great deal of coughing, and rising up in bed to make water, she was finally, and without previous pain of the thorax, seized with syncope, in which, at the end of about a quarter of an hour, without convulsions, she breathed her last.

I could not learn that she was ever affected with uterine hæmorrhage, except at the time specified in the report of June 5th, 1813.

She was opened the next morning between nine and ten o'clock.

The following is the account of the dissection, as given me by Mr. Norman.

“ In the thorax there was a very extensive adhe-
“ sion between the pleura on the right side, with
“ recent effusion of coagulable lymph; but no inflam-
“ mation of the lung. In the left pleura was a col-
“ lection of bloody serum to the amount of two
“ ounces, but no adhesions, or other appearance of
“ inflammation.

“ The pericardium contained about two drachms
“ of straw-coloured serum.

“ The cavities of the heart contained but little
“ blood. Their appearance was natural; and all the
“ valves were perfect, except the semilunar valves of
“ the aorta, which were cartilaginous and partly
“ ossified; in consequence of which the aperture into

“the aorta was so contracted as scarcely to admit the
“point of the little finger. A small portion of the
“right coronary artery was ossified, about an inch
“and a half from its origin; but the canal of the
“artery was not impervious, as a probe could be
“easily passed into it. The aorta was in every respect
“in a natural state.

“In the abdomen there was no disease of the liver;
“but the gall-bladder was become only a thickened
“membrane without any trace of a cavity, or any
“appearance of the cystic duct. The hepatic duct
“was more than twice its usual size, and the pori
“biliarii were unusually large, and distended with bile.

“The uterus was enlarged, so as to occupy the
“whole of the pelvis, compressing the bladder and
“rectum, and extending considerably above the brim
“of the pelvis. In shape it was nearly round, and
“it was very heavy and hard. When cut into, its
“substance was found to be solid, and similar in
“structure to a scirrhus. The whole cavity was
“occupied by an ossification, which was imbedded in
“the substance of the uterus. The right ovarium
“was of its natural size. It contained an ossification
“of the size of a horse-bean. The left ovarium was
“four times its natural size, and of a purple colour.
“It was filled with a soft greasy substance, of the
“consistence of lard, and of a chocolate colour.”

Death apparently from loss of power in the Heart.—Mrs. H., aged seventy-six, was affected with violent catarrh, such as was common to persons of all ages during the severe winter of 1813—14. It

seemed to be accompanied with some degree of peripneumonic affection, and though the pulse was not very quick, scarcely reaching 90 in a minute, the respiration was difficult and frequent, and she expectorated large quantities of what was evidently mere mucus. She was blooded at an early period of the disease; and after this operation I saw her. The blood was covered with a sort of gelatinous crust, semitransparent and tender; and the crassamentum did not separate itself from the serum, but occupied the whole of the cup, and when an attempt was made to raise it with a probe, fell from the crust like thick cream. This state, usually decisive of a fatal event, could not however in this instance be with safety relied on, as the cups containing the blood were placed on the ledge of a window in a cold staircase, during severe frost. Mrs. H. by degrees became better; so that in a few days her pulse and breathing, &c. returned to their natural state, and I took my leave of her. The next day I was, however, again called to visit her, in consequence of another violent attack of dyspnœa. In a short time she was again relieved; and on the morning of March 7, I again quitted her, conceiving my visits to be no longer necessary. On that afternoon, however, at three o'clock, she awoke out of sleep in a state nearly of syncope, the heart scarcely beating, the skin being cold, and wheezing almost to suffocation having taken place. Cordials and nourishing drinks, which had for many previous days been given, were more freely administered. The pulse became quick and full, and the

skin hot and sweating; and frothy mucus was expectorated. In the night, the difficulty of breathing increasing, she died.

This case appears to me evidently one in which, in consequence of the incapacity of the heart well to perform its propulsory function, blood was sent in insufficient quantity to the brain, and stagnated in the lungs, so as to compress the bronchial cells, and produce suffocation. A dissection was not obtained.

Convulsions and Palpitation cured by Leeches.—Mrs. S., aged about sixty, in consequence of having strained her ankle, was confined chiefly to the house, from October, 1810, to the latter end of the next summer. On the 15th of August, she was suddenly seized with a sense of suffocation from stricture of the thorax, accompanied with palpitation of the heart, and flushing of the face. Attacks of this kind continued to recur for several successive days, attended with great coldness of her feet, shivering amounting almost to general convulsions, rising in her throat, and considerable confusion of her head; and when they went off, left her with a quick pulse, and a dry furred tongue. After five or six days, they infallibly affected her, by day or by night, immediately on lying down. In this manner I saw her seized, about the middle of the day, on the 22d of August. She had tried various cordial medicines, had taken aperients, and was once bled in the arm.

Six leeches were applied to her temples, pills were given her consisting of Squills and Aloës, so as to keep her bowels gently open, and she was directed to

take frequent doses of Carbonate of Potash with Lemon juice, in the state of effervescence. Wine and all other stimulants were to be laid aside.

After the leeches had drawn, she felt immediate relief. The pills also kept her bowels gently open, and she was able to lie down in bed with a slight elevation of her head, by means of a bed-chair, and had two very comfortable nights.

On the 24th, her pulse was 72 in a minute, and all fur was gone from her tongue. Any attack of her complaint was very trifling, Her bowels had been kept open by the pills.

The medicines were ordered to be continued; and in order to hasten her recovery, six leeches were directed to be applied to her temples the next day.

On the 25th, I found her in every respect better. She was under the operation of the leeches, and in excellent spirits. Her night had been good, though she had not ventured to lie down without the bed-chair. Her tongue and pulse were natural, and her appetite good. She complained, for the first time, of some headach, *the usual sign of convalescence in such maladies.* She had no motion. An additional pill was therefore ordered to be taken, and the effervescing mixture to be continued.

Between this period and the 7th of September, she had three or four attacks of the complaint, but slight, and with long intervals. The medicines had been continued, and the bowels not being sufficiently open, an opening draught of Senna was occasionally interposed. When the flushing of her face came on,

it was accompanied with a pricking in her cheeks and about the throat.

Palpitation of the Heart, fatal, without much Organic Affection, producing Cerebral Extravasion.—Mrs. St. J., before her marriage in 1799, enjoyed a good state of health, excepting that, at the period of her monthly indisposition, she was subject to violent pains. During the early months of her first pregnancy, she suffered severely from sickness.

In May following, being a second time pregnant, she again experienced almost incessant sickness in an infinitely greater degree than on the preceding year, for near three months, being extremely emaciated, and in great apparent danger.

In August, she had rapidly recovered, when she was suddenly seized with the most agonizing pain in one loin, exactly in the region of the kidney, unaccompanied with sickness; from which she was in two or three days relieved, probably by the warm bath. She continued in perfect health till Nov. 1800, when she miscarried. Her sickness in May was immediately preceded by a violent alarm in a carriage. From this period to the birth of her next child in December 1801, she enjoyed very good health, although she had suffered considerable alarm from accidents in carriages in the preceding summer. She, however, still continued very well till about a month or two after the birth of her next child, in January 1803, when for the first time she experienced, though slightly, a palpitation or fluttering of the heart. It returned but seldom, and excited but little attention till towards

the end of the year 1804, when it becoming more violent and alarming, she consulted Dr. V. In 1803 or 4, she was again attacked by the pain in her back, but not so violent as in 1800. It was apparently removed by the application of heated irons. With the exceptions above mentioned, she enjoyed in general very good health and spirits till the Autumn of 1804; and subsequently, till her last confinement, was at intervals in good health; and particularly in September and October 1806, was almost wholly free from the complaint. It should be remarked generally, that her health was at all times improved by air and exercise, which also most certainly abated the fluttering, by which she was not more than once or twice attacked while walking, and then more slightly than usual at other times.

During the month of her confinement in November 1805, she had frequent and violent returns of the fluttering, attended by sickness, which symptom had not occurred above once or twice before in connection with the complaint of the heart. Her head was never affected during the attack; but she once, when otherwise tolerably well, suffered for a short time considerable giddiness.

Mrs. St. J. was safely delivered January 9, 1807, about three A. M., was in the drawing-room on the 8th and 9th, apparently in good health and spirits, and better far than on her preceding confinement in 1805, having experienced but little of the palpitation. When on the following morning, viz. Jan. 10, at 6 o'clock, he was suddenly seized with a violent reaching and

incessant sickness, but throwing nothing off her stomach, except mucus or saliva, attended by cold sweat, and a very quick and irregular action of the heart. The sickness was at length somewhat abated by taking brandy and water, but the cold sweat and palpitation continued, with pain across the chest, striking into the elbows of both arms, threatening fatal consequences for thirty or forty hours. She had taken for supper the night preceding toasted cheese and porter, and had been in a costive state for two or three days.

So far was written by the husband of this lady. It is, however, proper for me to remark, that none of these attacks were, strictly speaking, palpitation of the heart. There was, indeed, a very irregular action of that organ, which was far from being excessive as to violence, but quick, and extremely weak and unequal. This was the state of the heart at the period last described by Mr. S., and it was accompanied with such paleness, cold sweats, and faintness, that there was, on various occasions, reason to apprehend that every moment would be the patient's last. Each fit was attended with a pain across the middle of the sternum, shooting into both arms; and altogether, as to symptoms, it exactly resembled the Syncope Angens, and differed from it only in this essential point, that it was never brought on by any muscular exertion, but, on the contrary, followed unusual confinement, and became less apt to occur as that gave way to uniform bodily exercise.

It is necessary also to observe, that Mrs. S., was of a very costive habit, rather incautious as to the quality

of her food, often taking what her stomach would not well digest, and at very improper hours ; and there is reason to believe that several of the attacks might have originated from those causes. She was never affected with any disorder of the head, except the momentary giddiness some months before, till the period which I am about to specify.

The symptoms which I have described, exhibiting great want of power in the heart, were treated first with cordials and anodynes, and afterwards with cinchona ; due regard being at the same time had to the state of the bowels. Under this plan she grew better till the evening of January 18th, when she was seized with irregular action of the heart, and under a new modification ; for instead of a weak fluttering, it was now a strong and vehement palpitation, accompanied with sickness, and such a violent sense of pain and distention in her head, that she exclaimed, “ O God ! my head will burst.” These symptoms continued for an hour, and were followed by languor, and the usual pain in her chest and arms. That evening, and the next day, she had some slight returns of the first affection of the heart, one fit of which was attended with some pain in her head ; but on the evening of the 19th, she found herself, to use her own expression, “ very well.”

Early in the following morning, the 20th, she had another slight paroxysm, affecting the head rather more violently than the last. When she got up, she was altogether stronger, and more free from all complaint, than she had before been ; and unfortunately

exerted herself a great deal too much in consequence, ate too hearty a meal of partridge and minced pie, drank tea in the afternoon, went to bed at ten, and at eleven, while sitting up and eating sago, was suddenly affected with a return of the vehement palpitation, followed by sickness and the violent bursting pain in her head, in which, labouring under great agony, she made an exclamation similar to that on the 18th, and was soon after seized with a total loss of motion in the whole left side of her body, from her head downwards.

It now became necessary to change the whole plan of treatment, and to employ copious bleedings, both general and topical ; after which she slept and dozed through the remainder of the night. The blood drawn from the arm was of a strong texture, and covered with a cupped inflammatory crust.

On the 28d, in the morning, she was able in some degree to raise her leg and arm, and, in the evening, her fingers. She was at times a little wandering, but, after sleeping, was in that respect better, yet had for a few minutes pain in her head. The fluttering of the heart had returned, though in a slight degree, three or four times in the last forty-eight hours.

On the 24th, she had two slight attacks of fluttering, and for about an hour headach, more severe than on the preceding day.

In spite of one or sometimes two paroxysms daily, which were never violent, and some occasional returns of headach, she continued to mend till the 29th, when, at two in the afternoon, her left arm on a sudden again became motionless, and her face fell in a greater degree.

During that day there were three or four slight returns of the tremor cordis, but the more immediately concomitant symptoms of a new paralytic affection were scarcely perceivable.

From this time, scarcely a day passed without more or less of the affection of the heart, sometimes amounting to palpitation, at other times fluttering; sometimes with, sometimes without, sickness, and usually with the pain in the arms. Her head was also often affected with more or less of pain, which sometimes occurred by itself, but always attended the more violent fits of palpitation, and was then usually accompanied with sickness. Her mind was also in a very desponding state; notwithstanding which, she began to regain the strength of her limbs, was carried down stairs into her drawing-room, and was able to raise her arm, and, by the 23d of February, to walk a little way without assistance.

The means which alone seemed to mitigate her complaints were draughts of Potash with Lemon juice, in the state of effervescence; the constant use of aperients; the frequent application of leeches to the temples, and occasional blood-lettings from the arm. It was equally necessary to attend to her diet and exertions; animal food, too large or too late a meal, or any excess in sitting up at night, often exciting the inordinate action of the heart.

As, however, it was evident that on this, as on former occasions, no remedy for the radical evil could be reasonably expected, except from a gradual return to bodily exercise, it was proposed that Mrs. S. should

as soon as possible begin with being carried out in a sedan chair, whenever the weather and state of her health would permit.

Accordingly, she went out for the first time on the 26th ; and on the whole bore the exertion well. She continued this exercise occasionally for many days, but was never twenty-four hours without one or more attacks in the heart; and whenever that was violent, the headach invariably followed.

By the 5th of March, she could lift her arm with much more ease, could contract her fingers, and had a freer and stronger power over her leg.

On the eighth of March, she walked down stairs, and for the first time, thirty or forty yards in the open air, from which exertions she had evidently less of the disorder of the heart than before. On the 10th, she walked two hundred yards; and still farther on the 12th.

Thus she went on improving in strength, and, on the whole, in gradual exemption from her maladies, till March the 20th, when she seemed to have caught cold, was affected with catarrh and dry cough, and complained of soreness and pricking pain in her chest; to which, on the following day, were added pain in her back and limbs. On the 23d these symptoms increased, and, on the 24th, she suffered dreadfully from an earach, which continued all that day, through the night, and till four o'clock in the morning of the 26th.

From this most unfortunate occurrence, she was again for many days deprived of that exercise, from which she had already begun to experience her accus-

tomed benefit; notwithstanding which, the paralytic symptoms had evidently continued to decline, and the side of her mouth, in particular, was less dropped than it had before been. The affection of the heart and head recurred, at times, as before.

On the 29th, she had a great degree of fever, with violent pain in her face and head, which were somewhat relieved by the application of leeches; but at three the following morning, she was seized with a violent attack of fluttering in the heart, which continued, with sickness, great pain across her chest and in her arms, a pallid countenance and cold sweats, though without mental alienation, till about twelve at night, when she died.

She was opened by Mr. Tudor at nine o'clock in the morning of the 1st of April.

In the Head, the vessels of the dura and pia mater were unusually filled with blood, with which two of the principal arterial trunks of the former were so distended, as to be considerably relieved or prominent. The blood in the sinuses was coagulated. The dura mater itself was much thickened, hard, and tough. Between the tunica arachnoides, and the pia mater, on the posterior part of the cerebrum, there was in various parts of the sinuosities, corresponding with the convolutions, a deposition of a small quantity of whey-coloured fluid. The brain was of a firm texture, and the medullary substance, when cut through, exhibited on its surface many minute points of blood from the divided vessels. In the substance of the medulla itself, on the right side, there was a fissure or hole,

in shape approaching to an irregular square, with the angles rounded, about an inch and a quarter in that diameter which was somewhat the longest. It was situated a little above, and on the outside of, the right ventricle, the anterior part of which it over-reached forwards, and it passed sloping downwards laterally on the right, without communicating, in any part, with the ventricle itself. The internal surface of the fissure was of a yellowish brown, or grey colour, loose, irregular, and in consistence resembling pus mixed with brain. It contained about a drachm of purulent serum. There was in the ventricles the natural quantity of fluid; and their internal surfaces, the plexus choroides, and every other part of the cerebrum and cerebellum, were in a healthy state.

In the thorax, the pericardium was on the outside dry, and in its substance so thin and transparent as to resemble a thin wet bladder; so that even when it was somewhat raised from the heart, the latter could in some degree be seen through it. The heart itself was covered with a moderate quantity of fat, and was of the natural size and texture. In all the cavities there were large and firm coagula of blood.

Every part of the heart, valves, large vessels, and coronaries, was free from all appearance of disease; the lungs were in a healthy condition; and the thorax and pericardium contained no more than the usual quantity of fluid.

Syncope.—There can be no doubt that syncope usually arises from such a degree of diminished action of the heart as deprives the brain of that stimulus of

the blood which is necessary to carry on its functions. Hence the senses, but more especially that of seeing, become impaired. Blackness appears before the eyes, and the powers of voluntary motion are more or less diminished. At length a total want of sensibility and voluntary motion ensues.

It is curious to observe that in this case the body is bedewed with a cold sweat, the urine often involuntarily discharged, and the eyes filled with tears.

To what shall we attribute these changes? It is reasonable to suppose that they are some way connected with the previous state of facts. Shall we then infer that this state of incontinency in the capillary vessels, and the relaxation of the sphincter of the bladder, immediately arise from the diminished energy of the brain? or that they are the direct effects of the want of the immediate stimulus of blood on those several parts? Or, lastly, shall we attribute the affection of the sphincter to the former cause, and that of the capillaries to the latter?

These are questions of considerable physiological importance; because if both effects arise from the diminished energy of the brain, they add to those proofs of the power of that organ over parts not usually subject to its control through the medium of what is called will; or capable of being detected by the experiments of physiologists on living animals; or, lastly, in the case of the sphincter, they approximate the unconscious action of that muscle to that of those that are acted on by the will.

These points, important as they are, require for

their due explanation more collateral facts than I at present know.

I have often felt approaches to syncope, but only once its full power. They have arisen from blood-letting in the erect posture; from violent pain of various parts, and more especially from a sense of intolerable uneasiness, not entitled to the appellation of pain, arising from an affection of the colon, from the incapacity of expelling wind or fæces. Both states of suffering have still produced these effects, chiefly, or perhaps only, while my body has been erect.

These facts will, I think, explain several cases which I have seen of the sudden death of weak persons, which has occurred while they have been sitting upon the close-stool, after having had no motion or an imperfect one.

It has occurred without convulsion, and has been accompanied by a sudden paleness and cold sweat. It is true I have never seen a dissection of persons so dying; but I have so often seen and experienced in others as well as myself approaches to this state, and various irregular actions of the heart, which have accompanied a sensible want of alvine evacuation with an immediate incapacity of effecting it, and which have immediately ceased when evacuation has been obtained, that no doubt remains in my mind as to the accuracy of this explanation.

Wrongly supposed Organic Disease of the Heart.

—August 1808, Mr. B., aged about sixty, a temperate man, and of the middle rate of size and flesh, has been for eight or nine years past subject to attacks of

sudden sinking and intermission in the action of the heart, not preceded by any excessive throbbing, or accompanied with pain across the sternum or in either arm, but with such faintness and coldness of the extremities, as to threaten immediate dissolution. During the fits he has frequent spasmodic catchings of his limbs. They are never produced by walking up hill, or any other muscular exertion ; have sometimes come on at one or two o'clock in the morning, and at all other hours ; have occasionally followed exposure to cold and damp, and have sometimes begun with symptoms of coryza, but are never attended with either cough or difficulty of breathing. He is subject to some degree of dyspepsia ; and every attack of these fits has been, in a short time, succeeded by considerable purging, which has sometimes continued four or five days, and, though contributing to weaken him in his previously exhausted state, yet evidently appearing to diminish the affection of the heart. After the attacks he passes downwards a good deal of wind.

His urine, during the fits, is copious and pale ; and after they go off, high coloured, and with a farinaceous or lateritious sediment. His pulse on the next morning is always full, slow, and rather hard. Three years ago Mr. B. had, for seven or eight weeks together, a sense of suffocation, which produced livid blackness of his face, and used to be brought on in fits by laughing, by swallowing certain things, especially stimulants, as wine, &c., or by putting his head far back in bed with his chin raised.

For this affection of the breath, he began to take solid Opium, under the use of which it gradually went off, and has now for some years ceased to affect him. He has, however, continued the same practice, increasing it, especially during the fits of malady of the heart, so as then occasionally to take from twelve to fifteen grains of solid opium in a day.

It must not be omitted, that Mr. B. was for many years subject to great discharges of blood by piles, which, however, had ceased three or four years before these affections of the heart commenced, and appeared to have been removed by the habitual use of two or three grains of Aloës, with a small proportion of Tartrate of Potash.

Throughout the whole attack his bowels have been somewhat irregular, being sometimes costive, at other times purged, and then natural. He does not think this irregularity increased by the Opium; but fancies that he has a permanent stricture in the colon, which is hardly credible, since his bowels are usually capable of being opened by three grains of Rhubarb.

He takes very little exercise, eats with a keen appetite, is fond of savoury things, and drinks a good deal of small beer.

Conjectures as to Inflammation of the Heart and Pericardium.—May 25, 1809. In the case of Miss T.,* there was nothing to indicate any considerable affection of the substance of the lungs themselves; but the breath was very short, being at my first visit 78 in a minute, when the pulse was only 124. From

* See case p. 51.

this it was obvious that something impeded the free descent of the diaphragm, or the free elevation of the ribs. That the origin of this impediment was of the inflammatory kind was certain; because in the very beginning there was a strong quick pulse, with increased heat, and blood covered with a crust of coagulable lymph. The first question then was, what part was thus affected? On the fourth day of the disease, when the symptoms of cough and shortness of breath first appeared, the patient was frequently asked by Mr. Crook whether she had any pain, and, not till she was much pressed on the subject, acknowledged that she had some, and indicated the part affected, by putting her fingers on the region of the heart and drawing them across the sternum to the right side. The pain, therefore, must have been very slight, and its seat not accurately defined. It is, however, certain that in the syncope angens, the pain, originating in the heart, is similarly felt about the middle of the sternum, and often stretches as much into the right as the left breast.

Carditis, or Pericarditis more probably.—***
Taylor, aged about thirty-six, servant of R. T., esq; who had experienced violent attacks of acute rheumatism, and once or twice suffered from slight gout in the extremities, began, on the 24th of May, 1813, while on his journey from Ireland, to feel a pain within the left mamma, shooting across the sternum. After this he was wet for two or three successive days; and when he arrived at Bath on the evening of the 27th, had rheumatic inflammation in his right wrist, or hand,

and pains, accompanied with considerable fever, in all his limbs.

I did not see him till the 31st, at one in the afternoon. Besides some general pains, and more particularly in the right shoulder, but all unaccompanied with any appearance of local inflammation, the malady of which he more especially complained was a pain such as I have before described, within the mamma on the left side, stretching across the middle of the sternum. This pain always more or less existed, but was greatly aggravated in paroxysms, which frequently occurred, and in which he was affected with intolerable sufferings, so as to cry out with violence. For two nights he had suffered considerable delirium, having had no sleep, being extremely restless, and sometimes trying to get out of bed. The fits of pain were accompanied with much difficulty of breathing, and he was unable to make a deep inspiration. He could not lie on his right side, or flat on his back; and when he turned on his left side, the pain was greatly increased, and it seemed to him that something rolled over to that side. The posture in which he was most easy was lying on his back, somewhat inclined to the right side, and with his head low. He complained of frequent palpitation of his heart, and the paroxysms were often followed by sweating and faintness. The beating of the heart could be readily enough distinguished by the hand applied to the outside of the thorax; but it was in its right place, and in no very inordinate degree. There was no hardness any where in the epigastric or hypochondriac regions, and no

soreness on pressure either about the abdomen or thorax. The patient had occasionally a slight cough, with some expectoration of thin mucus. The pulse was 104 in a minute, full, strong, and bounding. The tongue was much furred and dry. The urine small in quantity, of a red colour (*flammea*), and without sediment. Copious stools had been obtained by medicine; and they were deeply tinged with bile, which, in the last evacuations, seemed as if newly secreted. There was no sickness. Fourteen ounces of blood were ordered to be taken from the arm; and a draught with three grains of fresh Squill, and a scruple of Nitrate of Potash, to be given every four hours.

Half-past seven, P. M. The blood was taken in four teacups. The crassamentum in each was firm, and had its surface covered with a thick concave crust of coagulated lymph, with fimbriated edges. Immediately after the bleeding, he felt great relief, and slept for an hour and a half. The pain, however, has now returned, and I have just witnessed one of the paroxysms of aggravation, which affects the parts precisely before described. The pulse, which is 96, and less full, hard, and bounding, than at my former visit, is perfectly regular. The respiration is 32, catching, and in no degree by the diaphragm, but almost wholly by the thoracic muscles, with little assistance from the supra-scapular. He says that he cannot breathe more deeply. He has had a loose stool tinged with fresh bile, and has made about half a pint of water, somewhat paler than what I saw this morning.

Some sweating attends the paroxysm ; but it must be observed that the weather is extremely hot.

R Potassæ Carbonatis gr. xxv.

Sacchari ʒj.

Scillæ recentis gr. v.

Aquæ ʒj. Sumat 4^{ta} quâque horâ cum Succo Limonis.

Horâ nonâ nocturnâ mitt^r Sanguis è Brachio ad ʒxiv.

June 1, nine A. M.—The paroxysm under which I saw him, continued about a quarter of an hour. The blood is exactly similar to that of yesterday morning. He bore the bleeding tolerably well, but, for some time after it, was rather faint. He slept the greatest part of the night, perfectly free from delirium, and with no return of the paroxysm, except for a few minutes about seven this morning, and then in a very slight degree. He lay chiefly on his back, and is now nearly, or perhaps wholly, free from pain. He has also much less of uneasiness in attempting to inspire deeply. Respiration 22 in a minute, and still apparently without any assistance from the diaphragm or scapular muscles. Skin hot. Tongue all over very white. No stool or urine since my last visit.—Pergat in usu Haustûs 4^{ta} quâque horâ, singulis additâ Potassæ Tartratis ʒj.

Half-past seven, P. M. One small stool since the morning, and frequent sickness, with one vomiting up of some infusion of Tamarinds. He has slept at various times, has lain on his back and right side, and has less pain in respiration. Pulse 90, and very

full. Respiration 24, and still wholly from the intercostals, which alone act, even when he attempts to make a deep inspiration. Tongue and skin as before. No cough.—Mitt' Sanguis è Brachio ad ℥xii.—Pergat in usu Haustûs, cum Scillæ recentis gr. iv. tantum in singulis Haustibus.

June 2, ten A. M. About fourteen ounces of blood were taken away. The crassamentum is much as that of the two former quantities, with a crust of coagulated lymph still tougher and more tenacious. He had less of faintness than after the last bleeding, and slept well through the greatest part of the night. He has been very sick, has once vomited, and had a fæculent stool. Pulse 90, and softer. Respiration 23, and partly by the diaphragm. He can make a much deeper inspiration than he has before done, and in doing so also employs in part the diaphragm. He is now lying very much to the right side. He is free from pain in the thorax, and has had no return of the paroxysm. Tongue cleaner towards the point and edges.—Pergat in usu Haustuum.

Eight P. M. He continues free from pain; can make a deeper inspiration, which is partly from the diaphragm; and has been able to turn farther round to the right side. Pulse 82, soft, and regular. Respiration 20, and somewhat less by the diaphragm than this morning. No motion. He has made a considerable quantity of urine, which is much paler than it was. No cough has been noticed to me.—Pergat in usu Haustuum,

R Pulveris Scammoneæ compositæ gr. vj.

Syrupi q. s. sit. Ft. Pilulæ duæ, cras primo mane, si opus fuerit, sumendæ.

June 3, ten A. M. He slept little in the night, in consequence of a continual rising of saliva in his mouth, accompanied with some occasional nausea. He has been free from pain, and can lie perfectly well either on his back or right side, but not on his left. Pulse 80, full, and rather bounding. Respiration 23, and more from the diaphragm. Tongue much less white. No motion.—Pergat in usu Haustuum sine Scillâ.

Eight P. M. He has had two sufficient motions, and been free from nausea. He complains of no pain, except an occasional darting in the left mamma, and now and then a sense of weight and burning there. Pulse as this morning. Respiration 24, in about equal proportions from the thorax and diaphragm. Capacity of inspiration greater than before, and more fully by the diaphragm, but still not without some apprehension, and degree of catching. Tongue very slightly furred. Skin cool.—Pergat in usu Haustuum sine Scillâ.

June 4, eight P. M. He slept well last night, and was not disturbed by pain, nausea, or spitting. He has had one large stool this evening, and has made through the day a considerable quantity of urine, which is high coloured, and without sediment. His pulse this morning at ten was 80, softer than before; and his respiration 25, much as yesterday. About two P. M. he tried to sit up, but after about ten

minutes became faint, and was bedewed with a cold sweat. He loathes all food. His tongue is much as yesterday. Pulse this evening 78, and softer than it has before been. He lies perfectly well on his right side and back, but complains that when he attempts to turn on the left he feels as if "the two sides of his chest were coming together." Some burnings of the left side have occurred; and when he inspires deeply, it is still with dread, and with a tremulous motion of the thorax. Some mucus has been occasionally coughed up.—*Pergat in usu Haustuum.*

June 5, ten A. M. He passed a very bad night from frequent returns of violent pain about the heart, with great burning, the latter of which still continues, and the former is renewed by the least exertion. There has been a good deal of feverish heat, and his skin is now preternaturally hot. His tongue is also more white than yesterday. Pulse 80, more full and bounding than for the two last days. That in the carotids also strong and bounding. The systole of the heart cannot be felt by the hand placed on the thorax. Respiration 23, and a good deal from the diaphragm. No motion. Urine less red, and clear.—*Mitt' Sanguis è Brachio ad ℥viii. Persistat in usu Haustuum; singulis additis Scillæ recentis gr. iv.*

Eight P. M. He bore the bleeding better than before, and felt his chest immediately lightened. The blood is similar to that before drawn. He has had two motions; after the first of which he was very faint. Pulse 80, and full, but less bounding. Re-

spiration 24, and partly by the diaphragm. He is free from pain, but cannot lie on his left side, from the sense of weight produced by that posture. He feels, altogether, better than he has before done.—*Pergat sumere Haustus ultimo præscriptos.*

June 6, ten A. M. He has been free from pain. The former part of the night he was rather hot, but had afterwards five hours of comfortable sleep, and awoke very much refreshed. Pulse 78, and soft. Respiration 24, and chiefly by the diaphragm. He has lain a little on the left side, but complains that when he does so, he feels some stitches in the opposite side. At eight this morning he had a good motion without faintness. Tongue more clean and moist. Skin cool. Urine approaching to the natural tint.—*Repetantur Haustus ad formam hesternam.*

Ten P. M. He is free from pain, and has occasionally lain on his left side, but says that he is not comfortable in that posture. Two motions. Tongue clean and moist. Pulse 74, and full, but soft. Respiration 18, and a good deal from the diaphragm. He feels himself considerably better, and says that this is the first day that he has had any true taste of what he has eaten or drunk.—*Pergat in usu Haustuum.*

June 7, half past ten A. M. He has lain a little on his left side without much inconvenience, but cannot sleep on it. His night has been very good. Pulse 72, and soft. Respiration 20, and more by the diaphragm than by the thoracic muscles. At eight this morning he had one good motion without faintness. He has much more cheerfulness and feeling

of health than he has before had.—Rep' Haustus novissimé præscripti.

June 8, eleven A. M. He has had a good night, lying chiefly on his back; for he still complains of the falling together of his sides, when he lies on his right, and still much more on his left. After sleep, he always feels great stiffness across his chest. Pulse 72, and soft. Respiration 20, and still more from the thorax than is natural. He takes a deep breath with apparent ease, and without any catching. Two motions. Urine made at nine last night is, for the first time, somewhat turbid. Tongue nearly natural. Though his appetite is much better than it was, he has hitherto taken no animal food.—Pergat in usu Haustuum et Diætæ solitæ.

June 9, eleven A. M. He sat up yesterday for an hour and a half, without fatigue, and slept very well during the night. Two motions to-day. Pulse 70, and soft. Respiration 20, partly by the thorax. Tongue clean, and appetite for animal food voracious. He says that he feels no complaint; but he acknowledges that he cannot lie with comfort on his left side.—Pergat in usu Diætæ jam præscriptæ, Haustûsque sextâ quâque horâ tantum.

June 10, eleven A. M. He got up yesterday, dressed and shaved himself without assistance, and afterwards sat up some hours without fatigue. He slept well last night, notwithstanding the occurrence of inflammation of the gouty kind all across the large knuckles of the right hand, which, though tender to the touch, have not been painful. Two motions.

Urine natural. Tongue clean. Pulse 70, and full. He makes a full inspiration with apparent ease, is free from pain in the region of the heart, but still avoids lying on the left side.—*Pergat in usu Haustus sextâ quâque horâ.*

June 11. Eleven, A. M. He slept well, has been up and dressed more than an hour, and denies that he has any malady. Gout gone. Two motions last night, and one this morning. Urine clear.—*Pergat.*

June 12. He sat up the whole of yesterday ; but last night there came on violent pain in the palm of the left hand, and across the large knuckles, so as entirely to prevent his sleeping. The knuckles are now red, and a good deal swelled. Pulse 80, and full. Respiration 28, chiefly by the thorax, across which he says there is some slight feeling of constriction, but no pain. He has occasionally coughed, and spit up some lumps of thick mucus. Skin rather hot. Tongue more white, and urine of a higher colour than yesterday. Two motions last night.—*Mitt' Sanguis è Brachio ad 3xij.—Sumat Haustum ad formam ultimam quartâ quâque horâ.*

June 13. Eleven, A. M. The blood in every respect has more of the appearance of what is called inflammation than any of the preceding. He had no faintness after the operation, but remained the whole day in bed. His night was very good. The back of the hand and knuckles are still red, and somewhat swelled, but altogether free from pain, except on being moved or touched. Pulse 76, and full. Respiration 18, and almost wholly by the diaphragm.

According to his own expression he has now not the smallest degree of pressure remaining about the chest. Two motions last night, and two this morning. Urine less high coloured than yesterday, and clear. Tongue white.—*Persistat in usu Haustûs 4^{ta} quâque horâ.*

June 14. Eleven, A. M. He sat up a good deal yesterday, and slept well during the night. The redness and soreness on pressure have nearly left his hand, but some swelling remains. Pulse 84, and soft. Respiration 20, and chiefly by the diaphragm. He is free from all feeling of disease about the chest. Three motions last night. Urine without sediment. Tongue somewhat white. He has sweated violently from three this morning until now.—*Pergat in usu Haustûs sextâ quâque horâ tantum.*

June 15. Eight, A. M. He has passed a good night, is up, and is free from all complaint except weakness.

Shortly afterwards this patient left Bath. On the 5th of April following, I again saw him. He had travelled with his master through different parts of England, resided with him for some time at his mansion in Ireland, and had continued to enjoy good health, except that on going up hill, or up stairs, he occasionally experienced a temporary fluttering of the heart. After sitting five minutes subsequently to his walking up stairs to me, his pulse was about 84 in a minute, regular, and full, and with somewhat of the metallic stroke.

Carditis.—October 25, 1811. William H., aged twenty-seven, thin, and of about the middle size,

was seized on the 12th of August, 1811, with rheumatic fever, in which all the joints of his extremities were successively swelled and inflamed. He kept his bed, except an hour in the day, for three weeks, sweating very much during the whole time. He had also pain and tightness of his chest, with difficulty of breathing and cough accompanied by some expectoration, which all together obliged him for several nights to be propped up in bed. About a month ago he was tolerably free from all these complaints, except debility. He came to Bath, and bathed three times, of which the last was on the 21st of October; after which he fatigued himself by a long walk. On the 22d, in the morning, he began to feel his present complaint, which has ever since been increasing. It is a great pain, of the dull kind, accompanied with tightness across the middle of the sternum, or somewhat lower, extending across the ribs on each side, and affecting the corresponding part of the back. It prevents him from making a deep inspiration; and his breath is extremely short, amounting to 68 respirations in a minute, each inspiration being very painful. He coughs occasionally, but very little, and does not expectorate. He lies at the usual height, best on his back, a little turned towards the right side. After getting up in bed, on lying down again, the pain or oppression is for a while greatly aggravated. There is nowhere any external pain or soreness on pressure. The attack was not preceded or accompanied with cough, shivering, or sickness. Countenance pale. Pulse 132, regular.

and soft. Carotids weak. No headach. Tongue white, and rather dry. No sleep since the attack; and during the night he was somewhat delirious. Bowels open. Hands rather tremulous. Skin of natural temperature. Water extremely red, and turbid.—Mitt' Sanguis ad ℥xii . (in four teacups).

℞ Potassæ Nitratis ℥ij .

Sacchari puriss. ℥iss .

Scillæ recentis gr. xxvi. Tere simul gradatim addens,

Aquæ fontanæ ℥v .

- - - Menthæ viridis ℥j . Sum' coch. duo ampla statim, et tertiâ quâque horâ.

Six P. M. Bore the bleeding well. The blood flowed down the arm, was long in coming, and was taken in a queen's ware bason; notwithstanding which it is very tough, and covered with a thick cupped crust of coagulated lymph. Pulse 140, and very weak. Respiration 80, and exceedingly short and laborious on the least exertion, as in speaking, or even when he moves his arms. Cheeks somewhat flushed. Is now obliged to be supported and raised by several pillows. Pain across the chest as before; and not extending to either arm. Begins to have mucus in his throat, which he strives in vain to cough up. He has taken only one dose of his mixture, and has had no stool. No urine since two in the morning.—Applicetur pectori Emplastrum Lyttæ. Pergat in usu Misturæ ultimo præscriptæ.

℞ Myrrhæ pulv.

Ammoniæ præp. āā ℥j .

Sacchari puriss. ʒj. Contritis adde.

Misturæ Camphoræ f. ʒvj. Sum^t. cochlearia
duo ampla subinde in languoribus.

Oct. 26, half past twelve P. M. Has had no sleep, delirium, sickness, or alvine evacuation. Urine, made at nine last night, about three quarters of a pint, extremely red and turbid, with a pink sediment. The pain across the chest and back is less violent than it was, and he thinks himself somewhat stronger. He is now lying on his back, supported by two bolsters and a pillow. Pulse 140, and more full. Respiration 44, and evidently more deep. No cough. No faintness. No motion since Thursday. Breath still hurried by speaking. Skin little warmer than natural. Lips red. He has twice taken the cordial mixture.—Pergat in usu Misturæ.—Mitt^r Sanguis ad ʒx. (in three teacups.)

Six P. M. The bleeding seemed to produce no particular effect. The blood in the two first cups has a moderately thick crust of coagulated lymph, somewhat concave, and extremely tough; in the third, no such crust; but in all the crassamentum is very firm, and of a dark colour, bearing a fair proportion to the serum. Has coughed, or rather hawked, once or twice, and brought up a little grey transparent mucus. The pain is somewhat worse than it was this morning, chiefly on motion. Pulse 140, and weak. Respiration 52. Skin much hotter than it has been. The respiration is not performed either by the diaphragm or the supra-scapular muscles. Tongue moist, and slightly white towards the root. It is uncertain

whether the blister has drawn or not. Has taken the mixture regularly, and one dose of that of Ammonia. No motion. Urine much as before. No headach, or delirium.

R Magnesiæ Sulphatis.

Mannæ āā ʒij.

Solve in

Infusi Rosæ ʒiss. ut ft. Haustus, cras primo mane sumendus.

Oct. 27. He was restless and somewhat delirious through the night, but slept about three quarters of an hour between five and six. The blister had risen well. This morning he feels somewhat easier about the thorax, when he moves. Pulse 132, and hard. Respiration 36. Urine as yesterday. No motion from the medicine, taken at six this morning. He has coughed somewhat more than he did, and has now and then, with difficulty, brought up some mucus, a little thicker than at last report. No faintness. Skin hot, as last night; and tongue much the same. He has not taken the Myrrh mixture since my visit. He is much troubled with flatulency.—Mitt' Sanguis è Brachio ad ʒxii. Repet. Haustus aperiens. Persistat in usu Misturæ è Potassâ, additis Scillæ recentis gr. iv.

Half past five P. M. The blood in each cup has a thick and tough cupped crust of coagulated lymph, and the crassamentum is very firm, and difficultly miscible with the serum. He was a little faint for a short time from the operation. Pulse 112, and more soft. Respiration 36, and more easy than it was.

He can now lie a little on both sides. One motion about twelve o'clock, without the second draught. Skin rather hot. He took one dose of the Myrrh mixture, when faint from the bleeding.—*Persistat in usu medicaminum.*

Oct. 28, half past eleven A. M. Had one motion after my visit yesterday; but the draught taken this morning has not operated. He slept the greatest part of the night, upon his back, supported by two bolsters and a pillow, free from delirium. He has now been up about three quarters of an hour, and is sitting in a chair. Pulse 129, full, and bounding. Respiration 32, and much deeper. He has coughed more, and more strongly, and has expectorated a larger quantity of a somewhat thicker mucus, as in a catarrh. Tongue much as before. Skin of natural heat. Face rather pale, but with a flush in the cheeks. Has taken none of the Myrrh mixture. Urine as before.—*Pergat. Horâ 2^{da} p. m. alvo non prius solutâ, sumat Haustum aperientem ut prius præscriptum.*

Oct. 29, quarter after twelve P. M. He sat up for about an hour and a quarter, and being then weary, but not faint, went to bed, in which he now is. He had three motions before twelve last night, without the second draught. No aperient, and no motion to-day. He has slept nine or ten hours since eight last night, and was able to lie on either side. On his right he slept a good while; but he says that turning on either side produces at first great pain there, which however wears off in a few minutes. No headach or

delirium. Pulse 104, and soft. Respiration 32, and more deep. He has much less uneasiness about the chest, and breathlessness, on motion. His cough is considerably more frequent than it has before been, and his expectoration is copious, but merely thin mucus. Skin cool. Face less pale. No urine since the last stool. Tongue as before.—*Persistat in usu medicaminum omnium.*

Oct. 30, six P. M. Sitting up in a chair. Had one motion yesterday after my visit, without the second draught. He sat up three hours, bore it tolerably well, and had five hours sleep. Three motions to-day from the opening draught. Pulse 90, and rather irregular. Respiration 28. Exertion, and more especially lying back after rising, puts him very much out of breath, and brings on the uneasiness across the chest, which he complains is more to-day than yesterday. He says that he is able to lie on either side. He has not been sick. Skin and tongue as before. No urine distinct from the stools. He has sweated a good deal to-day. He coughs very little, and has expectorated a small quantity of thin grey mucus, which is semi-transparent.—*Pergat in usu Misturæ, cum Scillæ recentis gr. xxxiv.*

Oct. 31, three P. M. He did not sit up yesterday above three quarters of an hour; and after my visit had one motion. He had a very good night, lying on two bolsters and a pillow, and was able to sleep, completely turned on either side; but always on first lying down feels pain and tightness across his chest, but not now in his back. He has coughed

very little ; and the expectoration is just as before. Pulse as yesterday. Respiration 32 ; and he can inspire more deeply than he could, which he does without coughing ; but is restrained by the feeling of stricture. From the beginning of the attack he has never had any rigor. Two motions to-day. No sickness. He is sitting in a chair, having been up two hours. Urine made this morning at nine rather high coloured, but clear.—Pergat.

Nov. 1, half past five P. M. He sat up yesterday from twelve at noon till ten at night ; had no motion, and slept from ten till seven without waking, lying principally on his right side. Pulse 84, and somewhat irregular. Respiration 20. Little or no pain now exists across the thorax. He has coughed very seldom, and has expectorated some lumps of thick mucus, of the same colour as before. Two motions to-day. No sickness. Urine in all respects natural.—Pergat.

Nov. 2, three quarters past four P. M. He sat up yesterday from eleven to eight ; and slept well till six this morning, lying indiscriminately on either side, and on two bolsters, without a pillow. Pulse 76, and considerably irregular. Respiration about 21. He can now make a deep inspiration without coughing, and only with some slight uneasiness about the thorax. He has scarcely any cough, and has expectorated only two or three times mucus as before. Two motions to-day. Appetite for these three days very good. No sickness.—Pergat.

Nov. 4, half past four P. M. He is now down

stairs, and sweating from drinking hot tea. Pulse about 80, and intermittent. Respiration about 22. He has no cough, and says that he feels no inconvenience whatever in breathing. His nights have been good, and he lies perfectly well on both sides ; still using two bolsters, though, he says, that he uses the second bolster merely from habit. One motion yesterday and one to-day.—*Persistat in usu Misturæ.*

Nov. 6, quarter past twelve P. M. He was up yesterday from eleven in the morning till ten at night ; and has slept very well. He has no cough or difficulty of breathing, even on coming up stairs ; but has a little uneasiness across the chest, if he sneezes. Seems to inflate the thorax without difficulty or inconvenience. Pulse 66, soft, and somewhat intermittent. Respiration 16. Bowels open once each day. He has a little rheumatic stiffness in his left collar bone, which he perceives only on moving his arm.—*Sumat Misturam ter die tantum per biduum, et postea bis die.*

Nov. 15. He has no cough, and is free from complaint, except some shortness of breath on walking up a good many steps. He can make a deep inspiration, and can lie on either side, and in the horizontal position, with his head low, without any inconvenience. Pulse 64, soft, and regular. Respiration 16, and so gentle as hardly to be counted.

Dec. 2, 1811. Mr. W. H., about ten days ago, began to have some pain in his back ; and on the 30th of November had a return of pain under the left breast, not extending through to the scapula, which

affects him more particularly on sneezing or yawning, but is not sore to the touch. It greatly impedes inspiration, during which it is much aggravated; as is also the case in walking. Pulse 80. Respiration 20. No shivering, fever, or cough. He has some difficulty in breathing for a few moments on first lying down, and cannot lie well on the right side. Urine of the natural colour.—Mitt^r Sanguis è Brachio ad 3x. Sumat Misturam ut primo præscriptam.

Dec. 4. The blood has a thick cupped crust of coagulated lymph, and is tolerably firm; but the serum is rather copious in proportion to the crassamentum. Bowels open. Urine natural. Breath better; but he cannot well lie on his right side. Pulse 72, and soft.—Pergat in usu Misturæ.

Dec. 8. He has continued his medicine regularly, and had every day one motion. Within these two days he has been able to lie on either side, and the pain under his left breast is gone; but for a day or two he has had a sensation of a load across the upper part of the sternum, which now chiefly occurs on exertion. A deep inspiration produces little inconvenience. Urine of a natural colour. Pulse 70, and soft. Respiration 18.—Pergat.

Dec. 20. When he walks fast, he feels tightness across the chest, and difficulty of breathing. Pulse, at my house 108, and full. Respiration only 18. Bowels open. He lies low in bed, but cannot lie well on his right side, from some uneasiness or difficulty in respiration. No cough. Urine of the natural colour, and clear. He has occasional pain in his left clavicle,

which is not sore to the touch.—Mitt' Sanguis è Brachio ad 3viii.

Dec. 23. The crassamentum was rather tender and small in quantity, but covered with a thin semi-pellucid crust of coagulated lymph, somewhat cupped. Since the bleeding he is in every respect better, and can lie as well on his right side as on his left. Pulse 66, soft, small, and not altogether equal in the strength or velocity of the stroke. Bowels open. Though he walked fast to my house in the Circus, he has found from it neither difficulty nor inconvenience.

Rheumatic Inflammation of the Heart.—Mrs. S., a native of Ireland, twenty-six years of age, and who has been married four years, and has one child between two and three years old, six years ago had a rheumatic fever, from which she recovered tolerably well; but I cannot precisely ascertain whether she was in any degree affected with the symptoms which now distress her previously to the month of August last, when she began to have a pain in the chest, which she attributed to cold, and notwithstanding which she bathed three or four times in the open sea. She was then seized with painful swellings in her knees and hands, which appeared again to be of the rheumatic kind, though, as she says, unaccompanied with fever. When these swellings subsided, which was at the end of about three weeks, she began to be more especially affected with her present complaints, which being supposed to be rheumatic, induced her to come to Bath, with the view of obtaining from the external use of the Waters the same relief as she had done in the former attack.

The symptoms are constantly quick and vehement beating, accompanied with hurried respiration, dry cough, and generally pain across the chest, shoulders, and in the course of the carotid arteries. These circumstances are worst at night, and for the most part prevent her lying down. There are, however, times, when for several hours she is tolerably easy; but even then she cannot lie on her left side, and her pulse is never below 100 in a minute. If she is up during the paroxysm, she is always writhing her neck and body from side to side in order to obtain ease; and has a habit of keeping her head and shoulders far back, with her shoulders and chin as much as possible elevated. Her pulse is always regular and strong, and during the paroxysm is about 112 in a minute. I cannot discover any aneurysmal dilatation of any of the arteries; but the pulsation of the heart extends itself very vehemently into the scrobiculus cordis, and even to the navel. In the paroxysm there is much flatulency, as in such cases has been commonly remarked by Morgagni and others; but eructations do not appear to afford her even temporary relief. Her appetite is good, and she swallows without inconvenience. Her tongue is clean; her skin cool; her urine in small quantity, high coloured, and depositing an abundant lateritious sediment. She has never spit blood. Her ankles do not swell. She is somewhat, but not considerably, reduced in flesh. All stimulants appear injurious to her. I have given her diuretics, refrigerants, and sedatives; and at her own desire she has been blistered. Opium in the quantity of from two

to three grains in the day, and Extract of Poppy to ten grains has not appeared to relieve the paroxysm. Some temporary advantage has been derived from small blood-lettings. Her blood is rather sizy, and has an appearance of slight crust of coagulable lymph on the surface. Her feet and hands are not peculiarly cold. This unfortunate case, so commonly arising out of acute rheumatism, proved fatal, general dropsy supervening. I do not believe that there was any dissection. [June 10, 1799.]

Enlargement of the Heart.—February 27, 1810. Master A., aged thirteen, was in the month of April, 1803, attacked with rheumatic inflammation, which successively affected the hands, fingers, knees, ankles, and feet; was attended with some fever; and continued for about a month. In April 1806, he was attacked in the same manner, but with much more of fever; and again in November for a short time, and in every respect more slightly. During the intervals, he was free from all disease. In February 1807, after some rheumatic inflammation in the shoulder, for two days, accompanied with fever, he began to have great pain in the left shoulder-blade, shooting through to the middle and lower part of the sternum, attended with some cough which was not violent, and great difficulty of breathing, which obliged him, when in bed, to remain constantly in nearly an erect posture. He was attended by an eminent physician, who finding, after an accurate examination of the thorax and abdomen, no vestige of internal mal-organization, considered the disease as being chiefly acute rheumatism. In the

course of his subsequent attendance he discovered some enlargement of the heart.

Since that period, Master A. has never regained his pristine health, and has had frequent attacks of pain in the left scapula, shooting towards the sternum, and accompanied with the former symptoms of slight cough, some expectoration, dyspnœa, and difficilis decubitus. Of these attacks the most severe have commonly been in the month of October. His pulse is usually about 96, while he is at rest; and 136 after walking up stairs; in both cases regular, and rather full. Both carotids beat very strongly and hard, so as to raise the collar of his shirt at each systole of the heart.

In the construction of his thorax there is a remarkable irregularity, the sternum being, throughout the greater part of its length, driven outwards beyond the due degree relatively to the right side, and the whole forepart of the thorax on the left side projecting in the same disproportionate degree. The pulsation of the heart is every where to be felt and seen through this morbidly prominent space, and even as far as the epigastrium. There is more or less of dry cough, especially after exertion; and in inspiration the whole thorax is elevated, together with the shoulders, in consequence of which the flanks are during each inspiration drawn in, following the ribs, while at the same time the middle of the belly is protruded by the forcible depression of the diaphragm. While in bed and asleep, he has often, during expiration, the same catching or grunting noise, suddenly following a sus-

pendent emission of the breath, as one often remarks in young children labouring under pleuritic affections. He can ordinarily lie equally well on both sides, and as long as usual. The state which I have described is that which may be considered as his best.

I recommended a very temperate diet, chiefly of vegetable food, abstinence from all fermented liquors, great caution as to exercise, especially after meals, open bowels, the constant use of Squills in such doses as his stomach would bear, and an issue or seton in the side affected. Some difficulties having been made as to the seat of the last remedy, it was inserted, on the 7th of March, in the right knee.

March 13. Yesterday at noon, the pain came on below the right scapula, extending through to the left breast, and aggravated by inspiration; but he says that he only believes it to be there, as he cannot exactly tell where it is. Pulse 108, and regular. Respiration 36, and regular. He cannot lie down quite so well as usual, but lies equally well on both sides. His cough is more frequent, and attended with wheezing. Face flushed. Tongue slightly white. Urine high coloured. He has usually had one loose motion daily, but not to-day—Mitt' Sanguis ad 3vj.

R Potassæ Carbonatis ʒijss.

Sacchari puriss. ʒij.

Scillæ recentis ʒj. Contritis adde,

Aquæ fontanæ distillatæ 3vj. Sum' cochlearia duo
ampla 4^{ter} die, cum Succi Limonis cochleari
amplo uno inter effervescentiam.

March 14. The blood flowed slowly; notwith-

standing which, two of the teacups have the crassamentum covered with a somewhat cupped crust of coagulated lymph, as thick as a crown piece; and the crassamentum itself firm. Pulse much as before, and bounding. Pains less than they were. Cough rather troublesome. Urine high coloured, and with a lateritious sediment.—Pergat.

March 16. Pain almost gone; and last night he lay down well in the horizontal posture, coughed a good deal, yet slept on the whole well. His cough continues to-day, with some mucous expectoration. He takes a deep inspiration without coughing. Bowels regularly open. Pulse 108, and soft. Respiration 32, and equal.—Persistat.

March 18. He has coughed and expectorated a good deal; but is in other respects as well as usual. Bowels open. Pulse 86, and soft. Respiration 28.

I occasionally saw him afterwards, and observed little variation in his symptoms. He went into the country, and some months afterwards died, but was not opened.

Enlarged Heart, with incompetent function in the Tricuspid Mitral Valves.—Mr. J. T., aged thirty-one, stout, and rather above the middle size, a man of excellent moral and religious principles, and sober and industrious habits, whose mother died several years ago under my care, from scirrhus of the stomach, was, about the year 1800, stabbed with a knife in the left side. The knife was supposed to have been prevented from penetrating the body by having struck against one of the ribs, and the wound got well without

surgical assistance. Mr. T., however, was greatly alarmed at the attempt; and from that period was subject to frequent fits of palpitation of the heart, especially on strong muscular exertion, so that the repeated strokes against the ribs during the systole could often be distinctly heard at a considerable distance. These attacks were always accompanied with more or less of difficulty of breathing; and became aggravated from his having been long in the water during the high flood, which inundated the lower part of his dwelling-house in the year 1809.

In the month of November 1812, during the severity of that early frost, he became affected with a cough, which was treated ably but ineffectually by Mr. White, apothecary. At five o'clock in the afternoon of January 18, 1813, Mr. T. was seized with a violent shivering, followed by heat and great pain in his left side, with difficulty of breathing; in consequence of which Mr. W. took blood from his arm at three o'clock in the morning of the 12th. In the course of that day I saw Mr. T. He complained of considerable pain in the left side, on which he could not lie. He coughed frequently, expectorated a good deal of mucus, and breathed quickly. His pulse, which during the night was at least 136, was now reduced to 120, and was full and strong. The blood, taken from a sufficiently large orifice, exhibited no marks whatever of what is called inflammation. Under the rigid administration of the anti-phlogistic regimen, of which frequent bleedings, and large doses of Squill, with moderate ones of Digitalis,

made a part, he became gradually better, so as to be able, about the beginning of February, to lie for some hours on the affected side, the pain of which was quite removed, and the cough almost cured. In the course of these bleedings, the blood by degrees shewed an increasing proportion of a somewhat cupped and fimbriated crust of coagulated lymph, though never in any considerable quantity. The expectoration still continued rather copious ; and was of a thicker consistence, but had none of the appearances of purulency. The urine became abundant, and lost the lateritious sediment, which it had before shewn. The tongue was clean, and the skin cool. As the appetite was also good, I with considerable reluctance admitted the use of fish, of which, indeed, a meal had been eaten for three or four days previously to my consent having been asked. In a few days the cough and dyspnœa became aggravated ; the pain and inability of lying on the left side returned ; the pulse was much accelerated, and became somewhat irregular ; the colour of the urine was deepened, and its quantity diminished, and the night urine deposited a lateritious sediment. Blood taken from the arm shewed more of the inflammatory crust than before ; but neither that remedy, nor blistering, with Squills, Digitalis, and Aperients, afforded him any relief. The sputa increased in quantity, and were slightly tinged with frothy blood.

It is something singular that during the many weeks that I constantly attended this patient, nothing had ever been said to me of palpitation of the heart, but on my visiting Mr. T. on the 21st of February,

I found him lying in bed, almost in an erect posture, somewhat turned to the right side, and labouring under so violent an attack of this malady, that I could distinctly hear his heart beat against his ribs. The pulsation was discoverable to the touch far below the ribs on the left side, and even across the epigastric region. The pulse in the radial and carotid arteries was very strong, and irregular, varying from 80 to 120 in a minute; and the respiration was 60, laborious and short, but not wheezing. The urine was very small in quantity, and high coloured, depositing a lateritious sediment. The mucus expectorated was more deeply tinged with blood than before. Much distress appeared in the patient's countenance. Some sweat bedewed his face and extremities, and his feet were slightly œdematous. The tongue, both now, and on all former occasions, was clean and moist.

On the 22d, at six in the evening, the pulse in the right radial artery was lost, and was scarcely perceptible in the left. In the carotid it was tolerably regular, weak, and 90 in a minute. The respiration was 64, not in any degree wheezing. The extremities were cold and sweating. Some small clots of blood had been expectorated. The patient was sensible of his approaching end, which he met with calmness, and without any alienation of mind, about one o'clock the following morning.

His thorax was opened by Mr. White, in my presence, at ten o'clock at night on the 24th of February. There was a small cicatrix about the middle of the eighth rib on the left side; but the instrument had evi-

dently gone no farther than the bone. The cartilages of the ribs were of a very uncommon degree of hardness, so that in order to divide them it was necessary to use the saw. The pleura was every where free from adhesion, and all appearance of inflammation; and there was no unusual quantity of fluid in the thorax. The left lobe of the lungs was full of air, and externally pale. The superior part of the right lobe was in a similar state; but about one-third on the lower part was throughout of a dark colour like liver, though it did not sink in water. The internal substance of the lungs was otherwise in a natural state.

The heart, all together, was nearly twice its natural size. The pericardium was very thick, and contained from eight to nine ounces of serous fluid tinged with blood. The surface of the heart was for the most part preternaturally pale; and there were no marks of inflammation on it, or on the internal surface of the pericardium.

The auricles were thin, and very large. The right contained a large quantity of black grumous blood. The tricuspid valves were extremely rigid, and the circular part to which their bases were attached was so hard as almost to be cartilaginous. It was impossible to ascertain the quantity of blood which had existed in the right ventricle, the ligature on the pulmonary artery having given way after that artery was cut through, and before the heart could be removed from the body for the purpose of examination. The pulmonary artery, at about half an inch from its exit, was three inches in circumference. The semilunar valves

were perfect. The quantity of blood in the left auricle was not discoverable, the ligature on the pulmonary veins having slipped off. The mitral valves were rigid; the annulus venosus was similar in consistence to the corresponding part on the right side of the heart; and in its substance at the base of one of the valves, there was a portion of bone of the size of a pea. The left ventricle was thick and strong, having in it some grumous blood. The corpusculum arantii of one of the semilunar valves of the aorta was cartilaginous. The coronary arteries were in a natural state; and one of the coronary veins on the posterior part of the heart was full of blood. The aorta was thick, and free from ossification or any other disease. At the distance of an inch from the semilunar valves it was two inches and three quarters in circumference.

On the whole, it was evident that both the tricuspid and mitral valves were in such a state as to be incapable of preventing the regurgitation of part of the blood into the auricles during the contraction of the ventricles at each systole of the heart.

Enlarged Heart from Ossification of the Mitral Valves, and Annulus Venosus.—Some time about the year 1798, I began to attend Mr. T. B., in a neighbouring town in Wiltshire, then about thirty-five years of age, who from his childhood had been very delicate in his health, but had been fond of horse exercise, and had occasionally indulged himself in hunting. He was an unmarried man, always very temperate with regard to wine, and extremely attentive to a very profitable business. At a period before

my attendance on him, which I did not note down, and cannot now ascertain, he caught cold from being wet and greatly fatigued with shooting in the dew, which was followed by pleurisy ; immediately after which he began to be affected with symptoms similar to those for which I was first consulted. These were an uneasiness and anxiety about his chest, which existed more or less constantly, with some intermission and inequality in the pulse, always increased in proportion to the degree of his muscular exercise, and then accompanied with shortness and hurry of respiration. When the hand was placed on the left side of the chest, the heart was felt to beat very strongly, while at the same time, at each systole of the heart, the radial artery was imperfectly dilated, and therefore the pulse was weaker than natural. These complaints were occasionally attended with deficiency of urine, and insufficient action of the bowels. There was also an inaptitude in his stomach to bear fruit or other acescent kinds of food, which always produced much flatulency, and sometimes sickness ; the latter of which he was disposed to remove by large draughts of warm water, which operated as an emetic. This was the state of the symptoms when I first saw Mr. B., whose complaints were not immediately threatening, and who used to come over to Bath to consult me. It was owing to the hurry produced by this exertion that his pulse was then in the state which I have described ; for even at a more advanced period of his complaints, many years afterwards, when I have visited him at his own house, and he was at perfect rest,

his pulse during a minute or more would scarcely exhibit one inequality, though it was always weak, and the heart at the same time beat violently against the ribs.

Considering his complaint as owing probable to ossification of some of the valves of the heart or aorta, I interdicted all strong exertions, full meals, acescent food on one hand, and strong stimulants on the other, and directed for him some pills of *Digitalis* and *Squill* to be taken when his urine was deficient, and three or four grains of the *Extr. Colocynthid. comp.* when his bowels were confined. These means, which were occasionally had recourse to for two years, always succeeded in restoring the flow of urine, and reducing the symptoms.

At length, in the year 1800, occurred a more violent aggravation of the disease, with marks of general dropsy. He was advised to employ another physician, who failed to afford him relief. Recourse was therefore again had to me. I found Mr. B. with his legs and thighs enormously swelled, with water even in the cellular substance of the abdominal integuments, and at the same time an evident internal fluctuation, a quick, irregular, and weak pulse, violent anxiety and throbbing of the heart, great difficulty of breathing even in the erect posture, and an utter incapacity of lying down in bed, together with an almost total want of the urinary secretion. He had some cough, but it was not frequent, and rarely attended with expectoration; from which, however, when it actually occurred, he seemed to find consider-

able relief with regard to his breath. For these symptoms he took twice a day, in form of pills, a grain of Digitalis, the same quantity of dried Squill, and half a grain of Calomel, with a draught of Citrate of Ammonia at noon and at bed-time ; to the former of which were added about three drops of Tincture of Opium, and to the latter from seven to twelve drops. His bowels were opened briskly with Jalap, Calomel, and Gamboge, and afterwards kept regularly open by means of two or three grains of Extr. Colocynth. comp. The opiates immediately procured him ease and sleep; and, in two or three days, the urine increased to three pints or more in the twenty-four hours, becoming clear and pale. In about a fortnight all the swellings were removed, and he returned nearly, but not altogether, to the same state of health as before, so as to be able to walk on plain ground, and to ride on horseback, and take journies in a carriage.

Occasional aggravations of his malady still however occurred, with their constant attendant of defective urine, which was always removed in a few days by the diuretic pills without Calomel, to which latter ingredient he became averse from its having produced slight soreness of his mouth. The relief which Mr. B. experienced from this medicine was indeed so great, that, for many years afterwards, it was with the utmost difficulty that I could ever prevail on him to abstain from it for a fortnight together, though I frequently admonished him that to take it when it was not wanted was a great abuse of it, which he

would probably some time or other having occasion to regret, when it might be required.

About seven years after this period, Mr. B. began to have a pain below the chest, somewhat different as to its quality, seat, and concomitant circumstances, from what he had before experienced. It was situated in the right hypochondrium and epigastrium, where there was an evident hardness, and soreness to the touch, which were accompanied with some yellowness on the skin. Various milder measures were tried without effect; but the symptoms were speedily relieved by Calomel, which again, in very small doses, brought on slight soreness of the gums.

In the year 1809, there was another considerable aggravation of the thoracic symptoms, which rendered him unable to come to Bath, and for which, therefore, I visited him at his own house. The following are the circumstances of his health, and of my judgment as to his case at that period.

Friday, August 4, 1809. Pulse 90, weak, and irregular. Systole of the heart 136, labouring, strong, and regular. Pulse in the two wrists equal. Respiration 36. A very strong pulsation extends all the way from the proper situation of the heart to below the sternum, where there is soreness, increased by pressure, which also produces sickness and faintness. As, with these latter symptoms, the pulsation is continued so far from the region of the heart, without any intermediate space, and the heart itself seems labouring with inordinate action, I think there is enlargement and perhaps other disease in that organ,

with no other enlargement of the aorta than some corresponding dilatation at its commencement. He has now, and has frequently at other times had, a dull pain about the last vertebra of the back, which is greatest during motion, and often is evidently relieved when he comes to rest. He has, also, occasional pain in the inside of the left shoulder, from near the axilla down to below the elbow, which it seems to surround. He finds great difficulty in lying on the left side, on account of the uneasiness produced by the throbbing of the heart, which is less felt while he is on the other side. He has also great difficulty in making a deep inspiration, but has no cough, except when he attempts to breathe deeply. Nose and lips livid. Hands very cold. Tongue rather furred. Bowels regularly open from one Colocynth pill every morning. He has frequent fits of sickness. Urine in unusually small quantity, and high coloured, but clear.

R Opii crudi gr. ss.

Extracti Papaveris albi gr. ij. Ft. Pilula,
meridie et horâ somni quotidie sumenda.

Sumat pilulas aperientes duas singulis Auroris.

August 6. Four stools yesterday, but none to-day. He has slept much better, and for these two nights best on his left side; has had no sickness; has suffered less palpitation and soreness, and is in all other respects better, except that his urine is still defective and high coloured, though clear, and he had last night some swelling of his ankles. Pulse irregular, soft, and weak, varying from 56 to 68. That of the

carotids corresponds in number with the radial, and is strong. The pulsation of the heart, while he is at rest, and while that of the arteries is such as is just described, is 108 in a minute, very full and regular. He is most easy while sitting up, and leaning his forehead on a pillow placed on a table before him. He sleeps with two pillows besides a bolster, and cannot lie on his back, with his shoulders low. Lips much less livid.—Sumat meridie et horâ septimâ p. m. quotidie Pilulam solitam è Digitalis et Scillæ singularum gr. j. Pergat in usu Pilularum aperientium et anodynarum.

August 8. The diuretic pills were begun on the evening of the 6th. On that day he had no stool, but having taken two aperient pills each morning, had three motions yesterday, and four to-day. In the first twenty hours subsequently to the commencement of the diuretic pills, he made two pints and a half of urine, and in the last twenty-four hours four pints, besides what has accompanied his motions; all clear and of natural colour. He has slept a great deal better, and is otherwise much mended, having less uneasiness about his chest, and no sickness. The chief pain which remains is under the ribs on the fore part of his right side, and he still lies best a little inclined to the right. Pulse in the radial artery 62, and irregular: that in the carotids the same, and the pulsation of the heart is now exactly synchronous with that of those arteries.—Pergat.

August 11. Urine from four to five pints daily, clear, and of the natural colour. Pulse in the radial

artery 66, and irregular : that of the heart precisely corresponding, but extending low down as before.

Mr. B. being thus again relieved by these small doses of the *Digitalis* and *Squill*, I discontinued my visits to him. He went on with his favourite pills, and took one anodyne pill at night, and from two to three of the *Colocynth* pills each morning. Thus he proceeded till the 1st of June, 1811, when I was sent for again to visit him, and found him suffering another aggravation of his usual complaints. He was not confined either to his bed or room; but the uneasiness about his thorax was extremely distressing, and muscular exertion greatly increased his sufferings. Shortly afterwards, some œdematous swelling began to appear in his feet and ankles, the urine decreased in quantity, and he no longer experienced any diuretic effects from his usual dose of *Squill* and *Digitalis*. The bowels were kept regularly open by his accustomed pill, and his appetite remained good. Larger doses of the diuretic combination were now given, and with good effect. The urine was restored to its natural quantity and colour, and the anasarcaous swelling diminished. It however soon increased, without any diminution of the urine, and gradually extended itself upwards, leaving in a considerable degree the ankles, and wholly quitting the feet, round all of which the skin became tight and hard like parchment.

During this period, considerable yellowness appeared on the skin, and the motions lost all apparent admixture of bile, notwithstanding which the urine was often nearly of a natural colour. Mercury in

various forms, both as an alterative and purgative, was now exhibited, so as at different times to operate briskly on his bowels, and slightly to affect his mouth. Little benefit, however, even of a temporary kind, was derived from these remedies. The patient's nights were extremely restless, and his strength evidently declined.

Sept. 17, 1811. Pulse in the radial artery 36, and regular, small, but sufficiently distinct: in the carotid 72, and very strong and bounding. Each diastole of the radial artery appeared to have in the carotids two corresponding ones, quickly following each other, as it were, with a double stroke, the last of the two being the strongest. This was after some exertion; but a minute or two afterwards, when he was at rest, the carotid beat no oftener than the radial, but the heart itself seemed to make a second stroke, similar to that which was before observed in the carotid artery, shaking the chest violently each time. The state of the arteries was alike on both sides.

He had now for several days had very bad nights, and had been more or less delirious through the whole twenty-four hours, especially during the night, and indeed for nearly a month before this time he had gradually become unable to give an accurate account of his own feelings, beginning a sentence without being able to finish it, and appealing to those about him for its conclusion. He was below stairs, and occasionally walking about; and the thighs and lower part of the trunk of his body were considerably œdematous. His tongue was clean and very moist; his

urine about a pint in the day and high coloured, but clear; and he constantly complained of such coldness all over him, as to require a fire during the extreme heat of this season. His nose had bled about an ounce during the preceding day. Leeches were ordered to his temples, and his medicines, which were Cream of Tartar, Gamboge, Squills, and Digitalis, were directed to be continued.

Sept. 19. Pulse in the radial artery 56, and irregular; and no perceptible double stroke either in the carotid or heart. He was, however, sitting below stairs in an easy chair, and dozing, in the posture of leaning forward, which was the only one in which he could get sleep day or night, the heart beating so strongly the moment he attempted to lie down or lean back in his chair, that all sleep was immediately chased away. Respiration 18. The state of his mind much as before; though he was much tranquillized by the application of the leeches.

Sept. 21. Pulse 48, and very weak and irregular. Extremities very cold. Nose and lips for many months past livid. No stool to-day. Urine not more than half a pint, without sediment, but very high coloured. No appetite for these two days.

On the 25th, he was unable, for the first time, to go down stairs. He was sitting up in a chair, leaning gently forwards, with great oppression in his chest, on which he objected to any cloathing, and was constantly desirous of having his windows opened. Purging medicines, which had been given him at various times for forty-eight hours, had failed to ope-

rate ; and during my visit he was seized with a fit of vomiting, in which the accidental contents of his stomach were ejected. His pulse was about 80 in a minute, his respiration 28. He was free from cough. His urine was about six ounces, with a lateritious sediment. Other aperients were given, which operated on the succeeding day.

He continued, however, either to vomit or spit up the greatest part of what was subsequently taken into his stomach ; and, rattling respiration gradually coming on, died at half past eleven at night, on the 26th of September.

He was opened, in my presence, at half past two P. M. Sept. 27, by Mr. George Norman.

The body was free from fat. All round the shoulders, and on the upper part of the back, there were a great number of dark-coloured round spots of various sizes, which were found to be ecchymoses, and which had probably taken place during life. The external jugular veins were prominent with blood.

Observations on the Head :—In separating the integuments, the pericranium was found to be removable with them by the hand only, and with uncommon facility ; and blood oozed out with great freedom, and for a considerable time, from numerous points on the surface of the cranium, chiefly on the posterior part. This was especially the case from three orifices, lying near each other on the side of the occipital bone, somewhat below and behind the posterior part of the squamous suture, from which the blood flowed in a short time to the amount of four or five ounces ; and

ultimately to that of eight or ten ounces. The whole was evidently venous blood. All the vessels in the membranes, and in the brain itself, were decidedly more full of blood than usual; and in the longitudinal sinus this was partly coagulated. Under the tunica arachnoides, and chiefly between it and the pia mater, there was a good deal of transparent fluid, which abounded most on the posterior or most depending part. The arachnoides itself was here and there more or less opake, with irregular pearl-coloured spots. The brain was throughout watery; and there was more than an ounce of clear fluid in the various ventricles, and a considerable quantity at the base of the skull, when the brain and its appendages were removed. In the surfaces and substance of the whole encephalon, including the medulla oblongata, there was no vestige of disease.

In the Thorax. As soon as the sternum and front of the ribs were removed, the first object which presented itself was a fluctuating substance, which seemed to occupy nearly the whole cavity of the thorax. This was the pericardium, which had in it about four ounces of yellowish transparent fluid, and contained a heart of a most stupendous size, being in length from its apex to its base eight inches and three quarters, and round the ventricles, below the origin of the large vessels, fourteen inches. This circumference, however, bore a very small proportion to the magnitude of the auricles, of which the right contained at least nine ounces of the blackest coagulated blood, and the left full thirteen ounces of coagulum, equally black with

the former. The heart lay nearly across the thorax, with its apex situated between the seventh and eighth ribs; and the most projecting parts of the right auricle, parallel to, and not more than two inches distant from, the sixth rib, driving the mediastinum before it, and compressing the right lobe of the lungs, which was not more than one-third of its natural size. Both auricles were preternaturally thin, and the left almost like a membrane. When the auricles were emptied of their blood, the ventricles alone were equal in magnitude to an entire heart of the largest healthy dimensions. They both contained coagulated blood, of equal blackness. The left ventricle was little larger than natural, and of a strong firm texture. The right was equally strong, and of twice the usual thickness. The semilunar and tricuspid valves were perfect; but one of the mitral valves was completely ossified, and the other, together with its carneæ columnæ and chordæ tendineæ, was rigid and immovable. The corresponding parts of the annulus venosus were conformable to their respective valves, and either ossified, or in a state approaching to cartilage; and the whole opening between the auricle and ventricle was so contracted as scarcely to admit the point of the little finger, to which the sides opposed a resistance incapable of being overcome without laceration. The pleural covering of the upper part of the left ventricle, and of the right side of the right auricle, was of a shining silvery appearance, like the expansion of a tendon. The coronary vessels were not diseased, and the heart was free from fat. The aorta and pul-

monary artery were strong, and free from ossification. The aorta, just without the semilunar valves, when empty of blood, measured two inches and a half in circumference; the pulmonary artery, before its division, nearly five inches. The heart did not adhere to the pericardium, which was much thickened, especially on the right side, where it adhered to the lungs, so as to be incapable of separation from it without dissection. The entire pleura on the right side, down even to the diaphragm, was of a most extraordinary thickness and solidity, resembling cartilage in whiteness and strength. The pleura costalis and pulmonalis on that side adhered every where with almost insuperable force, except for a space of four inches from the diaphragm upwards. This cavity, which extended from the mediastinum anteriorly to the spine behind, was completely filled with about six ounces of transparent yellowish fluid; the cavity being narrowed laterally by the preternatural situation of the mediastinum, which had been so displaced by the heart as nearly to touch the ribs on the right side. The right lobe of the lungs had not more than one-third of its natural dimensions, and was paler than usual, though not diseased in its substance. The left lobe was of a much darker colour, not adhering except slightly at its posterior part, and being in a healthy state. In the left side of the thorax there were about three ounces of fluid, such as before described.

In the abdomen; the liver was somewhat smaller and paler than natural, rough on its surface, hard, and when cut into, every where exhibiting a more

decided mottled appearance than usual, evidently from an incipient degeneration of its parenchyma into a state of scirrhus. The gall bladder had in it a moderate quantity of orange coloured bile; and both it and its ducts were void of calculi, inflammation, or any sort of obstruction. The stomach was moderately distended with wind. The villous coat was throughout of a purple blackness, and the same colour extended itself downwards through the duodenum into the jejunum. The pylorus was somewhat more contracted and rigid than usual. The omentum was very free from fat, and of a dark, livid colour. On account of the many hours which had been occupied by the minute examination which has been detailed, the few remaining viscera of the abdomen were only slightly scrutinized, and were not found to be diseased.

There was some water in the cavity of the abdomen, but its quantity was not ascertained.

The whole body was perfectly free from putrefaction; and even the abdomen scarcely exhaled any offensive smell.

Enlarged, or at least irregularly acting, Heart.
—Lady C. always sleeps best on the left side, the side affected; when on the other, coughs much, and has more uneasy feelings.

A very pure case of Syncope Angens.—1806.
Mrs. H. W., aged forty-nine, of a fair complexion, above the middle size, and rather fat, had many years ago a complaint in the liver, for which she underwent a long and successful salivation. At various times, also, she suffered what she called pain

in the heart ; for which she was in the habit of applying blisters. Four or five years ago, while in the bath, she was suddenly seized with a violent pain across the breast, accompanied with faintness ; which soon went off, and left her in her usual state of health.

On the 19th of March, at nine in the morning, while getting out of bed, she was suddenly seized with a similar pain, shooting into her left arm, attended with a cold sweat, and a feeling as if she was going to die. These symptoms lasted for a considerable time, with some sickness ; but she had no medical advice, and they went off without any remedy. It was not till the evening of the next day that I saw her ; when she said that she was perfectly well, and was walking about in good spirits. From the seat and nature of the complaint, unattended as it was with any flatulency, or other stomach affection, except slight sickness, I concluded the disease to be *Syncope Angens*. I ordered her a gentle opening medicine for the following morning ; and a draught with thirty drops of Sulphuric Æther, and the same quantity of Laudanum, to be in readiness on any threatening of a similar attack. To these remedies was added, at the patient's own request, a blister on the middle of the sternum. The medicine was taken, and operated gently ; and the blister rose well.

On the 21st, she went to a card assembly, and at nine o'clock was coming away in order to go to another ; but just as she was stepping into her chair, she was seized with another paroxysm of the disease ; in consequence of which she immediately returned home,

and went to bed. She did not, however, take the anodyne draught till a little after ten o'clock. I saw her at half-past ten. She was sitting up in her bed in cheerful spirits. The pain was felt across the middle of the sternum, stretching down the outside of the left humerus, to the outside of the elbow ; but not extending farther, or affecting the right arm. Her face and hands were bathed in a cold sweat. She had no flatulency or sickness, no pain on pressure about the stomach, no palpitation of the heart, dyspnoea, or hurry of respiration. She sometimes sighed, and made a deep inspiration without difficulty or pain. She said that she was better than she had been ; and that she was easier when sitting up in bed and bending gently forwards, than when lying down. Her tongue was clean ; her pulse 80 in a minute, rather full, but with an occasional loss of stroke, sometimes once in two or three beats, at other times not oftener than once in sixteen or twenty.

After staying with her a considerable time, I went down stairs, and thought it my duty to apprise Mr. H. W. of what appeared to me the seat and danger of the complaint ; but I did not succeed in alarming him to the extent which I desired.

Having ordered another anodyne draught similar to the former, and Mr. H. W. having given me a hint that I might take my leave, I did so ; too readily perhaps satisfied with the assurance given me by the patient, that the fit was going off.

Shortly afterwards, Mr. H. W. carried her up some tea, which she drank. At about quarter past eleven,

he went down stairs; and on returning in a few minutes, found Mrs. H. W. dead. A dissection was not permitted.

I have no hesitation in adding that in any future case of Syncope Angens, I would immediately on the attack order a small blood-letting (ad ℥iv vel v) and an opiate, followed by an effectual aperient, if the bowels have been previously or habitually costive.

Two others of my patients labouring under disease of the heart, tending to Syncope Angens, Mr. W. C., of Kemble, in Gloucestershire, and Mr. W. also of Gloucestershire, have since my attendance died suddenly, the former lately, the latter, I believe about a year ago.

Syncope Angens, followed by true Carditis, with Dissection.—Sept. 25, 1813, quarter-past five P. M. The Rev. J. S., a catholic clergyman, aged fifty, above the middle size, of extraordinary large dimensions round the thorax, full habit, and florid complexion, who for many years was accustomed to great exercise in walking, but for several years had led a sedentary life; four or five years ago became pretty suddenly affected with violent palpitation of the heart, accompanied with pain or stricture across the thorax, chiefly on the left side, on which he was unable to lie. He had a great deal of fever, but no cough. After some time he became better, but has never been perfectly well; and has been subject to almost daily recurrences of the pain, especially from solitude, mental apprehension or other agitation, or from bodily exercise. About nine months ago, the complaint came on every night for three weeks, at half-past twelve at night, while he was

in bed, and continued from seven to fifteen minutes. He has never had gout or piles ; but has always been subject to heartburn and flatulency. Bowels for the most part open.

Yesterday, during his journey to Bath, he was much frightened by the running away of the horses of the carriage in which he was. Last night, about seven o'clock, he suffered a paroxysm of the complaint for about half an hour, a second for three-quarters of an hour at six this morning, and a third at three this afternoon, which still continues. What he suffers is what he calls a dead pain and soreness below the sternum, or towards its lower part, and shooting into the left arm about the elbow. All these parts are sore on pressure. The pain is accompanied with a great sense of inflation of the stomach, and is somewhat relieved by eructation. He cannot bear to sit down, and is most easy in the erect posture in which he now stands, without motion, and greatly indisposed or unable to speak. His face and hands are bathed in a cold sweat. Pulse 96, and weak ; but much varying in point of frequency. Urine extremely high coloured, and with a very copious red sediment on standing.—
Mitt^r Sanguis è Brachio statim ad ℥viij.

℞ Misturæ Camphoræ ℥j.

Tincturæ Opii g^{ss} xxv. Ft. Haustus post sanguinis missionem sumendus.

Half-past nine, P. M. The pulse before bleeding was 72, and weak ; and shortly afterwards 84, and strong. The blood while flowing was of a very dark colour ; and is now tender, without any lymphatic

crust. In a few minutes after bleeding, the pain was greatly diminished, and the cold sweat ceased. He is now lying in bed on his back, supported by three pillows. Some pain still continues in the thorax, and is referred to a space about three quarters down the sternum ; in which part an aggravation of pain is felt from a deep inspiration. Pulse 108, moderately strong, irregular as to frequency, and occasionally intermittent. Respiration 20, and from the thorax only. No motion. He has taken the draught ; but, from the relief which he felt from the blood-letting, is desirous of having the operation repeated.—Mitt^r statim Sanguis ad ʒvj vel ʒviij , pro ratione effectûs.

R Extr. Colocynth. compos. gr. v. Ft. Pilulæ duæ
horâ somni sumendæ.

R T. Sennæ ʒiss .

Misturæ Camphoræ ʒx .

Pulv. Rhei gr. xii. Ft. Haustus, cras primo
mane sumendus.

Sept. 26, eleven, A. M. The blood flowed freely, was black, and has now the same appearance as the former. The pain continuing, he of his own suggestion took in the night twenty-five drops of Tincture of Opium, and thirty of Sulphuric Ether ; and no motion having been obtained by a quarter before nine this morning, he took half an ounce of Oleum Ricini, ever since which he has been sick, but has had no motion. Pulse 84, full and regular. Pain in the sternum much as before, but only occasionally, and then less in the arm. Both pains are increased by the least muscular motion.

R Extr. Colocynth. gr. xvi.

Pulv. Scammoneæ compos. gr. viii.

Syrupi q. s. sit. Ft. Pilulæ vi æquales. Sumat ij. statim, et repetat 3^{ta} quâque horâ, donec dimiserit venter.

Half-past nine, P. M. Three motions. Pain less. Pulse 100, and somewhat intermittent. Respiration 24, and still only by the thorax. Tongue white. Skin of natural temperature. Urine small in quantity, high coloured, and with a copious red sediment. —Sumat quartâ quâque horâ Aloës Barbad. gr. j. cum Haustu è Potassæ Carbonatis ʒj. Scillæ recentis gr. ij. Etheris Sulphurici gutt. xv. &c.

Sept. 27, half-past ten, P. M. He has had no sleep, and complains of a great deal of flatulency. One motion this morning. Pain less. Tongue as before, but somewhat more yellow. Considerable thirst. Pulse 120, weak, and occasionally irregular.

R Aloës Barbadensis, gr. iij.

Asafœtidæ gr. ix. Ft. Pilulæ tres æquales.

Sumat unam horâ 2^{da} p. m. et repetat horâ 6^{ta}.

Nine, P. M. He has been out of bed to-day; but was obliged through languor to go to bed in half an hour. One stool. Great flatulency. Urine nearly natural as to colour. He has had occasional pain in the chest and arm; but in a less degree than before. Both are still aggravated by a deep inspiration. Pulse 120, weak, and intermittent.—Rep^r Pilulæ ut ultimo præscriptæ. Sumat unam horâ xmâ nocturnâ, et repetat 4^{ta} quâque horâ.

Sept. 28, eleven A. M. He has had a much better night, without pain either in his chest or arm. No sickness or stool. Urine defective, and with a copious vermilion-coloured sediment. Face flushed and hot. Pulse 120, and less intermittent, and rather more full.

R Scillæ exsiccatae gr. iv.

Aloës Barbadosensis gr. iij.

Syrupi q. s. sit. Ft. Pilulæ tres æquales.

Sumat unam statim, et rept. 3^{ti}a quâque horâ;
superbibens Haustum ultimo præscriptum.

Half-past ten P. M. Two motions, fæculent and not loose, without sickness. Urine more copious, high-coloured, but without sediment. Redness and heat of the face gone. Tongue as before. His thirst has continued, and he has by my desire drank a great deal of cold water, and found it very refreshing. He has not risen to-day, but has lain much lower in bed, and slept a good deal, having been wholly free from pain in his arm, and nearly so from that in the chest. Pulse 120, more full, and with little irregularity. Respiration 26, and partly from diaphragm.—Pergat.

Sept. 29, three-quarters past eleven A. M. He has slept at various times, and had four motions, after the second of which, at one in the morning, he began to have in the thorax a return of pain, which he says, was “not angular, but broad,” and which still continues without affecting the arm; but accompanied with sweating. The pain extends to the right, about four inches from the sternum. Face flushed. Pulse 108

and regular. Respiration partly by the diaphragm. —Mitt^r Sanguis è Brachio ad ʒviij . —Pergat sumere Haustus sine Pilulis.

Ten P. M. The blood flowed freely. The crassamentum in each of the three teacups is very firm, and that in the first is covered with several patches of tough coagulated lymph. The surface of neither is concave. Three motions. Pulse 96, full, and equal. Respiration 26, and partly by the diaphragm. Complaints less.—Pergat in usu Haustûs 6^{ta} quâque horâ, singulis ad. Scillæ recentis gr. j.

Sept. 30, half-past twelve P. M. Night on the whole good. What little pain he has suffered has been confined to the chest. One motion. Urine rather high coloured, but without sediment. Tongue still covered with a thin yellowish fur. Pulse 93, soft, and regular. Respiration 24, and chiefly from the diaphragm.—Pergat.

Oct. 1. He has passed a very bad night from pain, which seems to have arisen from gravel in the ureter, in consequence of which he was obliged to take forty-five drops of Tincture of Opium. No stool. Tongue more clean. Urine very high coloured, with a crimson sediment. He has no uneasiness about the thorax, but a feeling of stricture. Pulse 90, soft, and regular.

R Extracti Colocynthis compos. gr. vj.

Pulveris Scammoneæ compos. gr. ij.

Syrupi q. s. sit. Ft. Pilulæ duæ statim sumendæ
Repetantur Haustus ad formam ultimam.

Oct. 2, half past eleven A. M. The medicine

operated thrice yesterday, and twice to-day. Urine still with a sediment, but less red. Tongue nearly clean. He has had a tolerable night. Little pain or stricture. Pulse 96, and regular.—Pergat.

Oct. 3. He sat up yesterday for some hours, and has had a good night. One motion. Complains little of the chest. Tongue clean. Pulse as before. Urine very high coloured, and with a pink sediment.—Pergat.

Oct. 4. He sat up yesterday for five hours, and has again had a tolerably good night. One of his opening pills taken last night has produced two motions to-day. Urine much as before. Tongue clean. He complains a good deal of heat and tightness across the thorax. Pulse 75, and soft.—Rep^r Haustus ad formam ultimam. Horâ somni sumat Pilulam aperientem unam.

Oct. 5. No motion. Urine and tongue as before. The stricture and heat are somewhat increased, but the former does not extend to the arm. Pulse 84, and soft.—Mitt^r Sanguis è Brachio ad ʒvij. Sum^t statim Pilulas aperientes duas, ut ultimo præscriptas. Solutâ alvo, pergat in usu Haustuum.

Oct. 6. The coagulum in three cups was concave on the surface, and, in two of the three, covered with a thin crust of coagulable lymph. He had one motion yesterday, and one this morning from a third pill taken at bedtime. From twelve to four in the morning he had considerable pain and heat of the chest, accompanied with copious sweating. Pulse 68,

regular, and soft. Urine very thick on standing, but less high coloured than of late.

R Infusi Sennæ ʒx.

Tincturæ Sennæ.

Mannæ āā ʒiss. Ft. Haustus, cras primo mane sumendus.—Pergat in usu Haustuum.

Oct. 7, quarter past twelve P. M. He was up yesterday seven hours. Had a stool at half past four P. M. but has had none to-day. The pain came on at half past twelve last night, accompanied with burning heat of the chest, but not extending into the arm. It lasted an hour; after which he slept well. He has to-day only had some stricture and sense of burning in the thorax, but no pain. Skin moist and cool. Pulse 76, regular, and more full than usual. Urine as before.—Horâ somni sumat Pilulas aperientes duas.

Oct. 8, half past eleven A. M. He was out of bed ten hours yesterday, and is now up. Two good motions yesterday; none to-day. Urine this morning clear, and less high coloured than before. From half past one to half past two this morning, he had a great deal of pain in the thorax, accompanied with the burning as before, in consequence of which he took, by his own desire, thirty drops of Sulphuric Ether in water. Pulse 78, regular, soft, and moderately full.—Mr. S. continued up till the afternoon, when, a severe paroxysm of the disease coming on, I was sent for, and soon arrived; but found the patient sitting in his arm chair, and perfectly dead.

He was opened on the 10th, at half past eight A. M. in my presence, by Mr. George Norman.

There was a good deal of fat about the heart, which was every where thin and flaccid. On the right or venous side, the auricle contained a considerable quantity of fluid blood. The internal surface of the whole of this side of the heart, as well auricle and ventricle, as chordæ tendineæ, carneæ columnæ, and tricuspid valves, was of a dark red colour, with large stripes or patches of the deepest purple, all of which was totally incapable of being washed off, and on cutting into the heart, was found to be gradually lost in the muscular substance. There was no ossification either in the tricuspid valves or the semilunar valves of the pulmonary artery. The purple colour before described imbued the inside of the pulmonary artery, as far as it was examined, but was wholly confined to its internal coat.

The internal surface of the left auricle and ventricle was of a still darker colour than that of the right, and the discolouration penetrated into the muscular substance. It extended itself also to all the other surfaces, and into the whole of the aorta, as far as it was traced, which was to the extent of several inches. In this part, however, the colour was a deep scarlet, which, as in the pulmonary artery, did not reach into the second coat, but caused the inner coat to assume the appearance of a scarlet ring, wherever the aorta was cut through transversely. The mitral and semilunar valves of the aorta were free from ossification, or other induration. There was some grumous blood in the left ventricle.

The aorta was neither more capacious nor thinner

than natural. In its internal coat there were several roughnesses or patches of incipient deposition of cartilage or bone.

The internal surface of the left coronary artery was red, like the aorta, to about an inch and a half from its origin; and afterwards was to a short extent in some degree ossified. In the right coronary the same colour extended to two inches of the inner surface, which then became perfectly black for an inch and a half, and immediately afterwards was ossified all round to the second bifurcation, one branch of which was in a similar state.

There was no appearance of inflammation on the external surface of the heart, or in the pericardium.

In the thorax there was about a pint and a half of bloody serum; and about an ounce of a similar fluid in the pericardium.

The lungs were wholly free from disease.

About the abdomen there was a great deal of fat, which was in a fluid state.

A dissection of that part, and of the head, was not conceded.

Syncope Angens.—August 4, 1813. Mrs. N., aged about sixty, was six years ago subject to pain in the right side, about the hepatic region, which was very acute, confined to a small spot, and was once followed by yellowness of the skin, and the passage of a soft biliary concretion. Since that time she has been exempt from the pain above described.

For these six or seven months she has been subject to an uneasiness across the middle of the sternum,

not amounting to acute pain, which extends a little to the right, but on the left stretches into the whole of the humerus, chiefly on the inside, and down to the elbow. This uneasiness has occurred only on walking, especially after a meal, or on going up hill, till lately, that she has once or twice felt it in a slight degree after having had a stool, though of a lax kind. After resting, the uneasiness soon ceases. Yesterday morning, however, about four o'clock, she was for the first time waked by an attack which was unusually severe, and which continued for twenty minutes, accompanied with a great deal of sweating. During the attack, she has a feeling of distention, which, as well as the attack itself, is relieved by eructation. The fits are unaccompanied either with palpitation of the heart or difficulty of breathing. Her pulse, when she is at rest, is usually 48 in a minute, weak, and unequal as to strength and frequency. On walking down stairs and then up again, the pulse is 80, and regular, without palpitation, or any perceptible hurry of breathing. She can make a deep inspiration; lies down well on both sides; and has no cough. Appetite and digestion tolerably good. Bowels habitually costive; but she has now, during several days of my attendance, taken Aloës, so as to keep them constantly open four or five times a day. Urine generally high coloured, and with somewhat of a lateritious sediment. Tongue clean. Sleep generally good. Occasionally, when she is free from the pain across the sternum, there is a feeling of tingling or creeping in the shoulder, as from water trickling down, and now and then

extending down to the wrist, between the thumb and fore-finger.

Pergat sumere Aloes Barbadosensis gr. j. ter die.

R Potassæ Carbonatis gr. xxx.

Aquæ distillatæ ℥iss. Solve et adde,

T. Corticis Aurantii ℥ss. ut ft. Haustus, primo mane et meridie sumendus quotidie.

Syncope Angens.—March 18, 1810. The Earl of W., aged sixty, in the former part of his life was a hard drinker, and much addicted to the pleasures of the chase. Thirty years ago he was for some time attacked with spasmodic asthma, which attacked him only or chiefly in particular local situations, and for which he was ordered to go to France. He got well; but three years afterwards, at Paris, after having been some time accustomed to drink a light pleasant Vin de pays of Tours, he was seized with fever and head-ach, and, on theory, drank half a pint of Madeira which he had with him. In the night he was seized with a violent fit of the gout, to which he has been ever since more or less accustomed in the beginning of the winter. In 1795 he had a violent typhus fever, and that and the following year escaped the gout. About ten years ago he began gradually to be affected in the following manner: On walking up hill he was seized with a pain across the sternum, about two-thirds down, extending very little into the right side, but stretching across the left breast, and down the inside of the same arm to all the fingers. These attacks are unattended with palpitation of the heart, or difficulty of breathing; but, on the contrary,

he finds great relief from a deep inspiration, and is much addicted to sighing. The complaint has gradually become worse: it often comes on from walking even on plain ground, if against a cold wind, but not from walking up one or two flights of stairs; though on going up a longer flight he is very much affected. These attacks have been in no respect lessened by the annual recurrence of gout in the winter, but have gradually increased upon him, though they have never attacked him except on walking as above, or trotting or riding hard. He lies equally well on both sides in bed, and has no dyspnœa in so doing. He appears at times to have a short dry cough, without expectoration. His bowels are open; his stools and urine of a natural colour; and there is not the smallest appearance or symptom of any disease in the liver. His stomach is free from flatulence, and appetite tolerably good. He informs me that his gout, though painful, has not been accompanied usually with fever, and that he has never lost his appetite in any of its attacks. Pulse always about 82 in a minute, and somewhat bounding. On making him walk up two flights of steps, it is quickened to 108, is full, and his breathing hurried in the full proportion at least. The attacks oblige him always to slacken his pace, but rarely to stop. They come on chiefly when he first begins to walk after breakfast.

Sometimes he describes the feeling in the arm like a tingling on the inside down to the fingers, like what arises from a touch or blow on the nerve in the elbow:

After being at Bath three or four weeks, drinking a little of the Bath Water, living calmly, and taking twice a day from one to two grains of Sulphat of Zinc, his pulse came gradually down from 66 to 72; being perfectly regular whenever I felt it. But he thought that the disposition to the complaint was not abated. I recommended a very small breakfast, five or six grains of Rhubarb with Ginger just before breakfast, the substitution of an issue in the arm for one in each knee, and not to walk for at least two hours after breakfast. Also to continue the Sulph. of Zinc, adding to each dose fifteen drops of Tincture of Squills.

Syncope Anginosa.—Mr. R., aged fifty-eight, above the middle size, fat, and florid, and originally used to a sedentary life in Jamaica, of which he is a native, but taking more exercise for the seven years since he has lived in England, eight years ago began to have gout, which, however, never affected him for many days, but was painful, and in his great toe chiefly, unaccompanied with fever. His last fit was two years ago. For many years accustomed to hæmorrhoidal discharge of blood, more in the West-Indies than of late; though it still occasionally occurs. Since his leaving Jamaica, he has begun to grow fat, and more especially two years last past, since which he has felt, gradually increasing, more frequent and more violent attacks of a complaint, which first began about three years ago: this is what he calls a pang or constriction across the chest, about the middle (or somewhat lower) of the sternum, not shooting into either arm, and altogether unaccompanied with difficulty of

breathing, cough, or palpitation. It affects him on walking, especially in a cold day, or against the wind, or up hill; chiefly of a morning when he first goes out, and obliging him to stop, when it goes off with a feeling about the part of what he calls trickling. When the pang is violent, it is soon followed by sickness, but not vomiting. It seems to be aggravated by, and accompanied with, flatulency, and goes off occasionally with eructations of wind. The attack often comes on every twenty minutes while walking, and then, perhaps, not at all through the day. Going out of a hot room into the cold air sometimes brings it on, as out of the playhouse into the open air on plain ground a few nights ago. So does usually lying down in bed at first. But muscular motion to a certain degree, which is not always alike, is the most obvious cause; and the complaint is more frequent in winter than summer; so that he seldom passes a day without it. Always least when his meals are sparing. Bowels open; appetite good; and no clear dyspepsia. Says he finds no difference on which side he lies, but prefers the right. Pulse 96. Once in my feeling it, it missed a stroke; and the pulsations are always hurrying and somewhat irregular as to force, and on the whole weak.

It seems to me that Mr. R.'s recovery depends infinitely more on a long continued and strict attention to regimen, than on the immediate operation of any specific remedy.

Mr. R.'s meals should all be very small, considerably less than his appetite demands, well chewed, and

slowly eaten. Animal food should not be eaten oftener than every other day, except, that on one of the days of abstinence, white fish may be in moderate quantity admitted. Chocolate, much butter or sugar, fat or fried meats, meats hardened with salt, pork, pastry, rich puddings, much spice, salmon, eel, salt-fish, salads, and cheese, should be avoided. Malt liquor, spirits, and all fermented liquors, except two glasses of wine, should be abstained from. Large draughts of any sort of liquor would be injurious, and suppers should be wholly omitted.

With regard to exercise there is much greater difficulty. As the attacks of disease are produced by bodily exertion, it might at first view appear necessary that exercise should be avoided. But on the other hand, when it is considered how much fulness and debility are produced by indolence, it cannot be doubted that Mr. R. should take uniform exercise, provided it be employed gently and with caution, so as to shun those exertions which most tend to excite paroxysms of the disease. Under these precautions, even that of walking on plain ground may be daily used, though never till at least two hours after a meal, and not against the wind. Stooping, and all sorts of straining should be avoided.

Mr. R. should go to bed and rise early, shun hot or crowded rooms, and guard his whole body against cold by proper clothing. He should endeavour always to go to sleep on his right side, and during the winter to have his bed warmed. The acts of lying down and rising from bed should be performed slowly.

With regard to remedies; great care must be taken to keep the bowels in an open state. This may be effected by the powders in the annexed prescription, of which one, or, if necessary, one and a half, may be taken at bed-time in milk and water. The pills in the annexed prescription should be taken for five or six weeks.

Should no benefit be obtained from these measures, it would be adviseable to have an issue made in one arm.

If any violent attack of the complaint should come on, the most efficacious remedy will be to have six or seven ounces of blood immediately taken from the arm.

℞ Sulphuris præcip. ʒss.

Pulv. Myrist. Nucis gr. xij. ℞. et divide in chartulas vj æq. Sum^t unam vel j cum dimidio h. s. alv. ast.

℞ Zinci Vitriol.

Scillæ exsiccatae āā ʒj.

Cons. q. s. s. Ft. Pilulæ lx. æq. Sum^t j merid. et j aut ij h. s. quotidie; quo minus autem moveatur nausea.

[March 16, 1809.]

Directions in a Case of Syncope Angens.—It is necessary that Mr. P. should carefully avoid suppers, and full meals of every kind. His food should always be well chewed, and eaten slowly. Fluids as well as solids should be taken only in small quantities. Pastry, confectionary, rich puddings, strong broths, fat or fried food, pork, meats hardened with salt, carrots, salads, salmon, eel, and shell-fish should be

avoided. Wine and spirits are also improper ; as also are the stronger kinds of malt liquor ; but fresh and weak table beer may be drunk, if it has not been found to disagree with the stomach by producing acidity or flatulency. Hot rooms, late hours, violent bodily exertions, and, if possible, all violent mental emotions, should be carefully shunned. Exercise after eating is generally in such cases injurious ; and walking fast, especially up hill, or up stairs, will usually bring on attacks. Gentle exercise, nevertheless, on plain ground, and on horseback in a slow pace, should be uniformly pursued. The feet should be kept constantly dry and warm by proper clothing. I would strongly advise that the issue in the side should be continued some months longer. With regard to medicines, I wish Mr. P. to take the pills in the annexed prescription marked No. 1, beginning with one at noon, and at nine in the evening, and increasing the dose by the addition of one pill daily, as far as the stomach will bear. Of the pills No. 2, one is to be taken every day immediately before breakfast, and another before dinner. If they purge too much, only half a pill is to be taken before each meal. In order to remove a fit when violent, the draught No. 3, may be taken during effervescence, with lemon juice : should this prove insufficient in a quarter of an hour, fifteen drops of Laudanum should be taken in a similar draught. It should, however, be attempted to relieve any violent or long continued fit, which resists these means, by having four or five ounces of blood taken from the arm.

No. 1. R Zinci Vitriolati.

Scillæ excissatæ āā ʒss.

Conservæ Cyn. q. s. s. ft. Pilulæ lx
æquales.

Sum^t unam ad v vel plures meridie et
h. 7^a p. m. q. dosi gradatim aucta.

No. 2. R Pilulæ Aloeticæ, Inglis's Scots Pill dictæ.

Saponis duri āā ʒj.

Aq. distillatæ q. s. s. ft. Pil. xx æq.

Sum^t unam quotidie p. mane et
pransurus.

No. 3. R Kali præparati.

Sacchari purif. āā ʒj.

Scillæ recentis gr. iij. Contritis adde,

Aq. fontanæ ʒj. ut ft. H. S^t. in promptu.

Sum^t cum Suc. Lim. cochl. amp. uno
inter efferv. p. r. n.

Probably Organic Disease of Heart, but not Syncope Angens.—January 7, 1804. Mr. W., aged sixty-five and a half, of a middle size, and moderately fat, accustomed to great exercise, formerly lived hard, but not for the last ten years; never had the gout, but about thirty years ago had a rheumatic fever, and since that time has frequently suffered chronic rheumatism, which he has been accustomed to relieve by Dr. James's Analeptic Pills.

About a year ago he had a cough, in consequence of having caught cold in hunting; and before he was quite recovered, being again hunting, he was suddenly seized with an aching pain across the middle of the sternum, which obliged him to stop. Afterwards,

in the month of February, he had the influenza, consisting of the usual symptoms of violent cough, and copious expectoration.

Ever since the first attack of this pain, he has been subject to returns of it on exercise. It strikes across the sternum into the left breast, scapula, and outside of the humerus down to the elbow. It sometimes also very slightly affects the right breast, and now and then, still more slightly, the right shoulder, but not the right arm. The pain attacks him walking even on plain ground, but more severely up hill, or in laughing, or straining at stool, especially after a meal. If during walking a sweat comes on, the pain is alleviated. He is subject to flatulency, and breaking up wind relieves, though it does not remove, the fit, which soon vanishes when he is at perfect rest. It is also occasionally produced by eating, and certain mental affections; but is never attended with any disposition to fainting. Yesterday, and the day before, after walking up hill to my house in the Circus, his pulse was from 96 to 100, tolerably full, and a little irregular. After exercise, the heart evidently palpitates to the touch; and he says that the pain is always accompanied with that palpitation. Pulse, when at rest, 84, and soft. Exercise produces neither difficulty nor hurry of respiration; and he takes a deep inspiration with the utmost facility. He feels no inconvenience from lying down in bed; but, on the contrary, is rather easier in the recumbent posture, and sleeps well. His bowels are habitually open, especially when he drinks tea. Urine in moderate

quantity and rather pale, generally with a light coloured powdery sediment. Tongue clean. Six weeks ago, his complaint was relieved by the loss of twelve ounces of blood from the arm. Blood drawn yesterday ad 3x was of a moderately firm texture, with a thin yellowish grey film of coagulated lymph, slightly curled at the edges.

I recommended that he should abstain from stimulating liquors; take all food, and especially animal food, very sparingly; avoid exercise, especially after meals; have an issue made in the knee or side; frequently lose a small quantity of blood, and for some weeks take the following medicines.

℞ Scillæ recens exsiccatae gr. xii.

Pulveris Foliorum Cicutæ 3j.

Confectionis Rosæ Caninæ q. s. sit. Ft. Pilulæ lx æquales. Sumat unam meridie et horâ somni quotidie; dosi gradatim auctâ.

Quotidie primo mane sumat Tincturæ Aloës compositæ 3j, ex aquæ cochlearibus duobus amplis.

℞ Misturæ Camphoræ 3vj.

Spiritûs Ætheris Nitrosi 3ij.

Tincturæ Opii gutt lx. M. Sumat cochlearia duo ampla urgente dolore.

This gentleman did not again consult me; but I learned that some weeks after he died suddenly, and that his body was not examined.

Affection of the Heart; not Syncope Angens.—The complaint of Mrs. W. does not appear to me to be Angina Pectoris. The pain in the chest, more

especially on the left side, and stretching into various parts of the left arm, is common to all diseases in which blood is unduly accumulated in the cavities of the heart. This effect may arise from various causes. In Mrs. W. there is too great reason to presume that it is owing to mal-organization of the heart or aorta ; but if I am rightly informed, that during the paroxysms the motion of the heart is excessive, both as to frequency and force, producing what is commonly called palpitation, that circumstance, in my opinion, shews the disordered state to be of a different kind from that which constitutes the *Angina Pectoris*.

The method of relief will be to keep the habit in a state of depletion, and to repress as much as possible the action of the heart and arteries.

With this view, spirits and all fermented liquors, except table beer, should be avoided. Animal food should be eaten only once a day, and then sparingly ; and all the ingesta, whether solid or fluid, should be of the least nourishing kind, and swallowed slowly and in small quantities. No supper, of any sort, should be eaten ; and Mrs. W. should avoid hot rooms, and carefully guard against the expression of any strong mental emotions.

Every violent muscular exertion, especially on a full stomach, is, in such cases, highly injurious. Walking up hill, or up stairs, lifting any weight, much talking or laughing, &c. &c. should therefore be avoided ; but as exercise is one of the most powerful means of diminishing vascular fulness and irrita-

bility, Mrs. W. should attempt the exercise of walking on plain ground, and so far as it does not immediately dispose her to paroxysms of the disease, habitually persevere in it, as far as her strength will permit; taking care not to walk in windy weather, and both then and at other times, to guard her legs and feet against coldness and dampness by proper clothing.

With regard to remedies, I would wish Mrs. W. to have eight leeches applied once a week, for six successive weeks, to the inside of the thighs just above the knee; and the flow of blood encouraged as much as possible by bathing the orifices with a sponge dipped in warm water. When the discharge has nearly ceased, a warm poultice should be applied to the part, and changed every hour while it continues to be suffused with blood; after which the parts should be gently bound with singed rag.

The pills in the annexed prescription should be taken for six weeks, Mrs. W. beginning with one twice a day, and adding one every day as far as her stomach will bear them. In this way, perhaps twenty pills or more may be taken daily. If any nausea should arise from their use, the dose should be somewhat diminished, and then again increased, so as to be kept within that limit.

Mrs. W.'s bowels should be kept constantly open, by means either of Lenitive Electuary, or of the mixture in the subjoined prescription.

In addition to these remedies, I would advise an issue to be made in one of her arms.

℞ Scill. exsic.

Zinci Vitriol. āā ʒj.

Cons. Cynosb. q. s. s. F. Pil. lxxx æquales.

Sumt^r unam vel plures meridie et horâ somni quotidie.

℞ Magn. Vitriol. ʒj. Solve in

Inf. Rosæ ʒxvss. et adde

Spirit. Nucis Myrist. ʒss.

Acidi Vitriol. dilut. gutt. xxx. Sumat cochl.
iv vel vj ampla primo mane, alvo astrictâ.

[August 14, 1804.]

AFFECTIONS OF VESSELS.

Aneurysm of the Abdominal Aorta.—Mr. H. J., aged about thirty-two, came to Bath in order to employ the Waters, under a supposed affection of the liver. Having employed that remedy both internally and externally, conjoined with a free use of purgatives, and finding his complaint grow worse, he consulted me in the month of May, 1810.

The symptom under which he described himself as suffering, was a dull throbbing pain on the side of the abdomen, somewhat to the left, and about two inches above the navel. This pain seemed to shoot through to the corresponding part of the vertebræ, was not relieved by posture, and was much increased by the stronger kind of muscular exertions.

Having made a very minute examination of the part affected, I found that there was, in the situation which I have described, a well defined roundish tumor of two inches or more in diameter, which on pressure was felt to pulsate through every part of it,

the dilatations precisely corresponding with the systoles of the heart. In every posture it remained stationary, was evidently deep seated, admitted the integuments of the abdomen to be moved backwards and forwards over it without being itself displaced, was not very tender on pressure, and was not continuous with the small lobe of the liver or with the spleen. From these circumstances, as well as from the ease with which the bowels were affected, and the want of fever or any disorder of the stomach, I had no hesitation in considering the complaint as an aneurysm of the abdominal aorta.

Under this impression I wrote down such directions, with regard to regimen and medicines, as tended to diminish the fulness of the habit, and counteract excessive vascular action; and requested that Mr. J. would leave Bath, and return to his friends.

On the next day, however, Mr. J. having desired a consultation, Dr. Haygarth and Mr. Tudor saw him with me. A very accurate scrutiny of the malady being made by those gentlemen, they perfectly coincided with me in opinion, and proposed no change in the measures which I had recommended.

Mr. J. now returned to his friends; and very properly consulted his own confidential medical attendants, who, doubtless from a material change in the symptoms themselves, took a very different view of the case from that which had been entertained at Bath.

I heard no more of Mr. J. for several months, till at length I received the following obliging communication from his Surgeon:

“ Jan. 17, 1811.

“ After his return to H. from Bath, he gradually
“ improved in health, and for a considerable period
“ looked almost well, and declared himself to be quite
“ so; although, of course, the continuance of the
“ pulsation would not let his mind be really at ease.
“ This amendment, the strength and equality of the
“ circulation throughout both the lower extremities,
“ and the strength and equal pulsation of the iliacs,
“ the seeming feel that the tumor had its surface in
“ uninterrupted continuation with that of the left
“ lobe of the liver, the pain in the scapula, the dis-
“ ordered state of the digestive organs, the circum-
“ stance that the tumor being so forward to the
“ abdomen was not much diffused, with probably other
“ reasons, induced Mr. — to think, though he
“ spoke with doubt and diffidence, that the case might
“ not be aneurysmal, but rather an enlargement of
“ the posterior part of the left lobe of the liver taking
“ the action of the aorta. Dr. — thought the
“ case admitted of considerable doubt. After this the
“ patient’s mind became more tranquil, and he passed
“ the remainder of the summer in tolerable comfort.
“ About two months ago (rather a month before his
“ death) he was sensible of an increase of his disease,
“ and his former symptoms harassed him severely.
“ He was tempted to accept an invitation to pass some
“ time in Berkshire, in a very favourable situation;
“ and began his journey on a Friday. He stopped
“ with a relation at Henley on Thames to receive
“ relief to his travelling, which however he had borne

“ well. On Sunday afternoon, soon after dinner, he
“ was attacked with excruciating pain and spasms at
“ the pit of the stomach, vomiting, fainting almost to
“ death, and delirium. In an hour or two he re-
“ covered exceedingly, and passed Monday tolerably.
“ On Tuesday he was so much better, that he felt
“ equal to a journey, and contemplated returning to
“ town the next day. On Wednesday morning the
“ pain and spasms returned, with a desire of stool,
“ and he passed some blood. He became faint and
“ cold, and died in the course of half an hour.

“ On examination of his body by Sir Astley Cooper,
“ an aneurysm of the aorta was discovered just at the
“ commencement of the superior mesenteric artery.
“ The sack was very large. It had burst twice ; first
“ by a very small opening into the folds of the mesen-
“ tery; afterwards into the duodenum. And the
“ colon was loaded with blood.”

Aneurysm of the Aorta.—Thos. W., a gardener, aged seventy-two, temperate in eating and drinking, seems to have been for several years subject to some palpitation of the heart, so that he was averse to going up hill; and also to coughs, especially during winter, accompanied with some expectoration, though without difficulty of breathing. Eight years ago he began to have a pain in his loins, which first affected him in the region of the right kidney, and then in that of the left, and was treated by a physician as being gravel. He had, however, no sickness, pain down his hips or thighs, or any uneasiness or difficulty in making or retaining his urine, which, though high

coloured and having a sediment, resembled neither coffee nor blood, and was never accompanied with any discharge of gravel. During this complaint, which continued for a year, he could not lie down in bed, but was obliged to sit bolstered up. He, however, got better, and was able to do some work ; but on account of the pain, was induced, from experience of relief, to press his hand on the left lumbar region ; which he so frequently repeated as eventually to wear out his clothes in that part, often saying that the complaint there would be his death. He walked bent forwards, leaning on a stick. For three or four of the last years the pain had been very acute ; and he often complained of what he called a bloating, and feeling of fulness and pain, in his breast, belly, and back. He lay in bed with his head high, but always turned to his left side. His hands and feet were not particularly cold, till some time before the conclusion of his malady. After walking, he often was affected with great sinking and faintness, which were somewhat relieved by nourishment.

During the six last weeks of his life these complaints were much aggravated, so that he was obliged to keep his bed, taking no solid food and scarcely any drink, except weak wine and water. Within that period he had several attacks of fainting, two or three of which were expected to prove fatal to him ; and for eight or ten days before his death, which happened on the 15th of October, 1808, he had occasionally difficult and rattling respiration.

He was formerly subject to discharges of blood from

inward and outward piles; but they had ceased for some years till within a month before his death, when he had great pain in his bowels, with frequent and considerable bloody stools, in some of which the blood was coagulated. His urine continued high coloured, and with a sediment. His pulse for some days previously to his death was from 90 to 96, and regular.

Not having seen this patient during his life, I obtained the above report from his widow and other female friends, and the state of the pulse from Mr. Norman, jun., by whom the body was examined, in my presence, at eight o'clock in the morning on the 17th of October.

He was much extenuated, and the abdomen fallen in. The latter being opened, the part of the liver which presented itself was the left lobe, all of which, except about two inches in breadth, lay in the right hypochondrium. It appeared to be thinner than usual, and reached six or seven inches lower than was natural. On the inferior edge of that lobe was a round tumor, about the size of a common marble, which extended through the substance of the lobe, and proved to be a cyst, containing matter of the consistence of curd. The whole liver was otherwise sound. The cardiac portion of the stomach passed perpendicularly downwards, wholly on the left side, and the pyloric portion, forming a right angle with it, extended as low as the umbilicus, with the pylorus resting on the spine. The spleen was also farther back than usual, and placed perpendicularly, so that

what should have been the anterior extremity corresponded with the posterior angle of the lowest rib.

These viscera owed their unnatural position to a tumor, which exhibited itself at first view towards the left side below the diaphragm, so as very much to resemble a heart preternaturally enlarged, but which on farther examination appeared to be an aneurysm of the aorta. It was at least ten inches in length; in its greatest diameter, which was near the upper end, six inches; and in its smallest, at the lower end, two inches and a half. It extended from the seventh vertebra of the back to ————— about an inch above the origin of the emulgent arteries, passing partly through the diaphragm, and adhering in the thorax to part of the lungs and pericardium, and in the abdomen to the diaphragm, liver, and upper part of the stomach. The vertebræ from the seventh of the back to the twelfth were considerably carious in their bodies, but their ends and their immediate cartilages were little affected. The whole aorta above the tumor was larger than natural, measuring at the upper part of the arch, when the sides were compressed together, full two inches across, and gradually diminishing down to the part before mentioned, when the aneurysmal dilatation suddenly began. The sack was distended with a firm coagulated mass, of a somewhat lamellated texture, having an appearance of fibres in proportion as it approached the sides of the aorta, and exactly resembling in colour and consistence a slice of roasted bullock's heart. Towards the posterior part of the coagulum, a tubular channel,

of about the natural size of the aorta in that part, remained for the passage of the blood. Of this channel the internal surfaces were more porous and spongy than other parts of the mass ; and it contained some grumous blood of the common appearance. The whole coagulum, with the distended part of the artery containing it, weighed three pounds and one quarter avoirdupois. The sack was a mere dilatation of the artery, without any apparent rupture, or any passage of the internal through the muscular and cellular coats as commonly supposed ; but the surface of the internal coat was rough and irregular. No effusion of blood had any where taken place. There was no appearance of ossification, or any other disease, in any part of the aorta, coronaries, or valves of the heart or arteries. The heart was not above two-thirds of the usual size, thin, flaccid, and covered with a good deal of fat.

The stomach, pancreas, spleen, and kidneys, were altogether in the natural state, and the last free from all appearance of calculi. The intestines were all extremely small and thin ; the colon little larger than a man's thumb of the common size. They were all much redder than natural. The hæmorrhoidal veins in the rectum were preternaturally distended with blood.

The diaphragm was very much extenuated, exhibiting very little appearance of muscular fibres, and being in various parts so transparent, that the finger could be in some degree seen through it.

There was no water in any of the cavities of the

thorax or abdomen, and the lungs were in a sound state.

Probable Death from Suffocation from Aneurysmal Tumor pressing on the Trachea without bursting.—Mr. N., aged forty-nine, of the middle size, and moderate as to flesh, was for some time under my care with violent attacks of pain in the head, and vertigo, in which the pulsation of the carotids was preternaturally strong and full. As he was free from all complaints in his stomach and other chylopoetic viscera, and experienced no relief from purging, I directed him to be in various ways blooded, to abstain from fermented liquors, spirits, and full living; to keep his bowels uniformly open, and his feet warm; and to take constant exercise in walking.

After these means had been for some time beneficially pursued, the reluctance to what he called starving, which had accompanied my first recommendation of these measures, increased to such a degree, that he dismissed me, and returned to the usual modes of life.

Though I often afterwards met this patient in the street, I heard no more of him till the month of Feb. 1813, four or five years after the period to which I have above alluded. He was then visited by Mr. Phinn, apothecary, and Mr. Geo. Norman, surgeon. On the 20th of March he sent to me. On the preceding day he had wilfully gone out, and by the exertion found his complaint greatly aggravated. From the time of Mr. Norman's attendance, the swelling was much increased. The second and third ribs were considerably pro-

truded for near five inches to the right of the sternum. The corresponding part of the sternum itself, and a small part of the beginnings of the second and third ribs on the left side, were also in some degree preternaturally prominent. The substance of the ribs was not externally destroyed; but between the ribs there was every where throughout the tumor a pulsation corresponding to the systole of the heart. Little soreness or other inconvenience was any where felt on pressure. The pulse in the radial arteries was 84, weak, unequal, and occasionally disposed to intermission. That in the right radial was so weak as scarcely to be felt, and I was informed by Mr. Phinn, that a stroke was often lost in that artery, when it was perceptible in the left. From merely walking round the room, the pulse was much weakened in both wrists: it was feeble, and nearly alike in both carotids. The pulsation of the heart was perceptible below the ribs on the left side, while the patient was at rest; but there was no palpitation.

In the course of the preceding summer Mr. N. had begun to experience breathlessness and coughing on walking up hill. He was, also, usually more or less affected with a pain and numbness in his right shoulder, shooting down the outside of the forearm; but I could not learn whether this symptom, though it was sometimes much worse than at other times, was aggravated by exercise. For five or six weeks before my visit the breathlessness was much increased, so as to prevent his lying down in bed. His cough was frequent, and he expectorated a great

deal of thin, opake mucus, much resembling purulency. His appetite was good; and his bowels were in a natural state; notwithstanding which, he was extremely emaciated. For nearly a year he had been free from headach and vertigo. His extremities were moderately warm.

By the directions of the medical gentlemen who attended him, he had been debarred the use of animal food, and stimulating drinks; had been enjoined rest; and occasionally lost small quantities of blood, with temporary relief to his dyspnœa.

I recommended a perseverance in this plan, and the use of the sedative diuretics, with Syrup of Poppies, if the symptoms suffered any considerable aggravation.

On the 23d of March, I again saw him. All the symptoms were much increased. His pulse was 90, and somewhat unequal. His breathing was very laborious, though in consequence of an increased dose of the anodyne, somewhat better than it had been on the preceding night, when he appeared threatened with almost immediate suffocation, attended with faintness. During inspiration there was much rattling, and the expectoration was copious, and difficult. For twenty-four hours he had been unable to swallow any solids, in consequence of a sense of resistance which he experienced during their passage. His bowels had been spontaneously open. He was unable to leave his bed, in which he sat erect.

I advised him to continue the Syrup of Poppies.

On the 24th, the respiration was somewhat less

laborious, but other symptoms continued. Pulse 96, regular, and alike in both wrists.

On the 25th, finding himself considerably better, with copious expectoration, he went down stairs, and saw several friends, with whom he exerted himself in conversation. About six in the evening the dyspnœa greatly increased, and continued, accompanied with indescribable restlessness, lividness of countenance, and a threatening of immediate suffocation, till about eleven at night, when he died.

I earnestly intreated a dissection; but could not prevail on his executor to admit it.

Aneurysm of the Thoracic Aorta.—June 18, 1809. Mr. S., aged thirty-nine, of about the middle size, and rather fat, leading a sedentary life, but temperate, and observing regular and early hours, enjoyed good health till eight or nine years ago, when he had a rheumatic fever, which for nearly five months deprived him of the use of his limbs, and affected him with what he calls spasms across the chest, which were extremely violent when he either attempted to lie down in bed or to get up, but became tolerably easy when he remained quiet in either of those postures. He cannot recollect whether he had any difficulty of breathing, cough, or pain in the left side.

For these complaints he came to Bath, bathed, and drank the Waters; but for a considerable time received no benefit. The pain having then settled in the right side, Mr. Bowen ordered the application of sixteen or seventeen leeches, and afterwards a tepid bath; from which he obtained relief. The last pain

which he remembers to have suffered during this attack was in his right knee. At length, he got well.

A year or two afterwards, after having written at a desk for three or four hours, he occasionally felt pain across the chest, which soon subsided on his resuming the erect posture, and walking about. He was also subject to violent coughs, which were attributed to cold; but he does not recollect that, under any circumstances, he was ever affected with difficulty of breathing till about the month of November 1807, when, in the midst of a walk on plain ground, he was suddenly seized with a burning heat or pain about the lower part of the sternum or pit of the stomach, extending all round and upwards, with great panting and breathlessness, which obliged him to stand still for breath three times in the space of one hundred yards, and both ceased on his desisting from walking. It is not clear, however, that he may not have experienced this malady in a very slight degree, and on walking up hill, before the time last specified. He also recollects that for five or six years past he has occasionally had sickness in the morning, together with some yellowness about the eyes; and now and then pain in the small of his back and both shoulders, after standing for some time in the ranks as a volunteer; both which symptoms soon went off on his sitting down.

The disorder about the thorax has continued more or less ever since, gradually increasing till these six weeks past; since which the trotting of a horse produces intolerable difficulty of breathing and oppression,

For about the same period he has been constantly

in a greater or less degree, affected with a pain at the scrobiculus cordis, which is sometimes extremely acute, though it does not seem at all to keep pace with the difficulty of breathing, being often very bad when that is not peculiarly aggravated, and often slight when that is violent. The pain is accompanied with a burning heat, and has been occasionally attended with sickness, and twice or thrice with a vomit of green fluid. He has never had any decided jaundice, though his eyes and skin have now a tendency to yellowness. His stomach is disposed to flatulency, but not disordered by acids in general, though it suffers from Port wine. He has never had gout.

During the best state of his breathing, on lying down it often immediately becomes so bad, as to oblige him to sit up for several hours, after which it grows well, sometimes suddenly. He is always under the necessity of lying high in bed, lies equally well on both sides, and on either rather better than on his back. Any degree of muscular exertion brings on the difficulty of breathing; but in walking he has no pain across the breast or in his arms, nor is he sensible of any palpitation of the heart. He seems to make a deep inspiration with ease. He coughs occasionally, but with little or no expectoration. Even when he is at rest, there is a strong pulsation in the scrobiculus cordis, and about the heart; and there is also some pain on pressure about the former, but no apparent hardness, either there, or in either hypochondrium.

Pulse 92, and soft, while he is at rest, with occasionally, though rarely, a faltering stroke. On his taking only one turn across the room, pulse 96, fuller, and equal; and respiration 25. After walking up to his bedroom, pulse 116, respiration 36. Hence it appears that the disordered respiration is chiefly produced by some change occasioned by muscular exertion. Pulsation of both carotids extremely strong and full. Lips not pale, but rather of a full red. Feet warm. Some swelling of the ankles for a night or two past. Urine in quantity about a quart daily, and in colour resembling rather pale porter. One stool almost every day; at this time abounding with bile. Tongue clean. He complains of a bitter taste in his mouth.

June 21. On the 19th and 20th he took Calomel and Senna, and this day the following medicine was ordered:

℞ Scillæ recentis gr. v.

Potassæ Carbonatis gr. xxvj. ad ʒss.

Sacchari puriss. ʒj. Contritis adde,

Aquæ distillatæ ʒj. ut ft Haustus meridie et hora somni cum Succo Limonis cochleari amplo uno inter effervescentiam sumendus.

June 23. Each dose of the medicine produced pain in his stomach. Bowels open. Occasional piles. Breath as before. Legs continue to swell slightly at night. Urine considerably less high coloured than it was. Pulse 84, regular, full, and strong.

℞ Hydrargyri purificati.

Mannæ āā ʒj. Terantur simul donec disparuerint globuli; dein addatur.

Scillæ exsiccatae ʒss. ut ft. Massa, in pilulas xx æquales fingenda. Sumat unam meridie et horâ somni quotidie, donec gingivæ inflammatione levissimâ afficiantur.

Pergat sumere Mist. h. 11^a A. M. et 7^a P. M.

Being about to leave Bath, he was directed to take once a week a Calomel pill and an Aperient draught; to avoid strong exercise, late hours, and hot rooms; to take gentle exercise in the cool open air on plain ground, keeping his feet warm and dry; to abstain from all fermented liquors and spirits, from pastry, fat, fried, or salted meats, rich puddings and salads; to eat peas, fruit, and acids, with caution; to abstain from suppers; and to take all food in less quantity than his appetite demanded.

July 13. I again saw this patient. His pain is not near so violent or so long continued as it was; but every morning when he wakes he has a pain just in the scrobiculus cordis, and the same pain is always produced by walking or riding, and on those occasions extends itself to the lower part of the scapulæ, chiefly on the left side. It is rather of a shooting, throbbing kind; and is often accompanied with palpitation of the heart, which is especially produced by any surprise, or walking up hill; and then the pain increases, attended with breathlessness, sinking and faintness, so as to threaten his falling, but not with the acute burning in the part which he occasionally at other times feels. He thinks that upon the whole he is better, and can walk on plain ground considerably better than he could; as, for example, two miles

without stopping, whereas before not a hundred yards,

On examination, I find a considerable pulsation from the middle of the lower part of the sternum, and in the scrobiculus cordis; and I think more there than in the proper region of the heart. Is there not an incipient aneurysm of the aorta descendens in the thorax?

Urine from two to three beer pints per diem, and two or three stools. He has had occasionally some discharge of blood by piles. Yellowness of his eyes quite gone. His mouth is not affected by the Mercury. Pulse 88, after sitting for half an hour, full, and regular. That of the carotids strong and full.—
Cras mane mitt' Sanguis è Brachio ad 3vj. Persistat in usu Haustus ad formam ultimam ter die; et sumat Pilulam è Calomelane et Haustum aperientem semel in hebdomadâ. Cum singulis Haustibus sumat Scillæ exsiccatae gr. j.

From this period the complaint continued to recur, with its different variations of pain, breathlessness, palpitation, and more or less of faintness, at different periods in the twenty-four hours, but more usually after exertion. Horse exercise constantly brought on a pain in the shoulders, and especially in the left; and from the 21st often occurred severely in the right. His urine became smaller in quantity, and often deposited a lateritious sediment. His bowels continued regularly open, and his motions were always rather dark coloured. On the 22d he for the first time felt the pain from the shoulder down the arm to the wrist “very severe and gnawing;” but in his own report to

me, he does not specify which arm. He was directed to continue the other remedies, and to increase the dried Squills as far as his stomach would bear. This he gradually did, so as in a few days to take seven grains daily. The pains continued to recur in various parts of the thorax, back, and shoulders; and about this time he remarks that he has begun to have a cough, with some expectoration; that his palpitations, though not so frequent as formerly, would come on from the least agitation, and sometimes when he was "perfectly easy and composed."

Circumstances continuing as before, six ounces of blood were taken from his arm in the beginning of August, and on the 16th of September; four ounces on the 26th; and six on the 6th October; but without relief to his thoracic disorder. An issue was also placed in his side. The disease of the liver appeared to gain ground, and a slight salivation was induced.

October 28. He is now on account of breath generally obliged to sit upright in bed; and when asleep in a more recumbent posture, is often waked with general agitation and dyspnœa, and obliged to start up. Cough very frequent, especially while he is in the horizontal posture, with little expectoration. He has great beating in the epigastrium, which extends all round the left side and into the carotids. Urine very small in quantity, high coloured, and with a pink-coloured sediment. Bowels open.

November 14. Mr. S. was growing slowly worse; his breathing being disturbed by the least exercise, and even by raising or turning himself in bed. The

pulse was from 90 to 100, without irregularity ; the bowels regular ; the fæces of a good colour ; and the urine natural in quantity. The œdema of the legs continued. The pills of Quicksilver and Squill had been repeated, so as to bring on slight ulceration of the gums ; and were then desisted from, and a grain of powdered Digitalis, twice a day, substituted. This medicine was continued about ten days, and then discontinued, on account of a troublesome sickness, which might probably have arisen from its use. The nights were rendered much easier by opiates.

On 16th of April, 1810, a letter from Mr. Lawrence, of Cirencester, informed me that “ Mr. S. “ had lived until the beginning of the month, getting “ daily, though slowly, worse ; his breathing being “ particularly distressing. His family very readily “ consented to an examination of the body. The “ cellular substance was loaded with water, with which “ the cavities of the thorax and abdomen were also “ distended. The lungs were rather dense in structure, and there were various adhesions of the right “ lobe to the pleura costalis. The pericardium was “ full of water ; the heart somewhat enlarged, and “ its substance soft. There was no other preternatural appearance in its substance, cavities, or “ valves ; but the aorta, at its curvature, was dilated “ into an aneurysmal pouch. The liver was enlarged “ and rather hard ; the gall-bladder moderately full “ of bile, and in it some portions of concreted bile, “ and small calculi ; but no obstruction of the “ duct.”

Aneurysm of the Thoracic Aorta.—May 17, 1809. Captain B., of the Marines, aged forty-one, of a small stature, temperate as to liquors, a hearty eater, accustomed to a life of great exertion, exempt from gout, eruptions, or hæmorrhoids, but who, from marks in his neck, seems to have been formerly scrofulous, has been long affected with considerable disease about the neck of the bladder, which often renders the passage of the urine difficult and painful, and produces an admixture of white mucus with his urine. During an aggravation of these symptoms, four years ago, he was seized with shivering, succeeded by heat and other marks of fever, which continued several hours. After they had subsided, he slept for four or five hours, and was suddenly awakened, about two o'clock in the morning, with an uneasiness in the chest, threatening suffocation, which continued for several hours. Ever since that period he has been subject to sudden attacks of dull pain down his arms, from the shoulders to the elbows, which it seems to surround; and these have gradually increased in severity, accompanied with pain in the chest and back; all having been greatly aggravated five months ago by a sudden and violent exertion in hallowing and running, in order to take a hare from his dog.

The following is the present state of the symptoms. About the union of the third rib on each side with the sternum, and in the corresponding part of the sternum itself, there is an appearance of slight protrusion; and in that part, and to some distance round it, there is a throbbing very strong to the touch,

which can be felt in a less degree in the corresponding part of the back. This throbbing, even while he is at rest, is accompanied with a dull oppressive pain in the parts described ; but if he coughs or uses any exertion, the pain becomes agonizing, and often, to use his own expression, "like a sword piercing him through to the opposite part of the back, taking away his breath, and suspending his faculties." From the back it seems to stretch into both shoulders and arms to the elbows, which it affects, in the manner before described, like a dull rheumatic pain. That of which he complains respecting his breath is a pain in inspiration, which makes him breathe quickly rather than deeply. The pain extends itself also upwards on the right side of the neck to the mastoid process. He lies best on the right side, occasionally turning on his back ; but if he lies wholly on the latter, or turns to his left side, he is soon affected with the agonizing pain. Even when at rest he cannot, without difficulty, make a deep inspiration. Mere talking, or lifting his hand to his head, considerably aggravates the symptoms ; but if after that effect from walking, he leans on his right side, the pain is greatly alleviated. It is increased by swallowing either solids or fluids ; and he cannot take a large draught. Pressure on the sternum or ribs produces no uneasiness ; but between the second and third ribs near the sternum, on either side, it gives excessive pain. The pulse in his radial artery, as he is now sitting up on a sofa, is 84, regular, and moderately full ; but I find that it is often irregular while he is

at rest, and still more so on walking, in consequence of which it increases to 120 in a minute. I perceive nothing particular in the state of the carotids. The pulsation of the heart is in its right place, moderate, and not continuous with that already described; and he has not been affected with any disposition to fainting.

He coughs little; but usually does so very strongly two or three times a day, occasionally expectorating mucus, from which he seems to experience some relief.

Certain circumstances respecting the pain in his chest and other parts are worthy of note. In the commencement of his malady, both it and the difficulty of inspiration were in some degree diminished as he became warm by exercise. At various subsequent periods, when he became chilly from the application of a caustic to the strictured part of the urethra, the pain always increased, but went off as he became hot. At this time, exposure to cold air aggravates the pain; and drink, gently warmed, diminishes it. The symptoms are always alleviated by opiates, but they produce very inconvenient costiveness. Blood taken away four days ago had a very thick and extremely cupped crust of coagulated lymph. His feet are not swelled, and his extremities are now warm. Having no doubt that Captain B.'s complaint was an aneurysm in the arch of the aorta, I directed him to live wholly on vegetable food, which was to be well chewed, and eaten in small quantities; to remain chiefly at rest, especially after eating; to abstain from spirits and fermented liquors; to keep the

bowels regularly open ; to take thrice a day an effervescing draught, with six grains of fresh Squill and Opium, according to the necessity of the case ; to have an issue made in the arm or thigh, and to lose four ounces of blood from the arm once a week.

Captain B. living several miles from Bath, I saw him no more till June 22, when the following particulars were noted.

He has kept his bed for a month, and sitting up is now painful to him from a sense of weight which it produces in his chest. There is now an evident increase of the prominence in the upper part of the sternum, rather most somewhat to the right, which, though not soft, is sore to the touch, and where a beating can be distinctly felt. He has great pain in the part, and difficulty of breathing, so that when he wakes, "the first inspirations," as he says, "are almost suffocating to him," and he compares the pain of his breast to that of an abscess. There is occasionally great sweating about the breast. The weather is now extremely hot ; notwithstanding which exposure of his body to the air immediately increases the pain. He has not been bled for ten or twelve days, and has no rest without considerable doses of opium, which always produce great difficulty in moving his bowels. He has occasionally for a day or two had piles, with now and then a slight discharge of blood. Countenance livid. Feet tolerably warm. Pulse 92, soft, and regular. Respiration 30.

On the 9th of July, I learned that, subsequently to my visit, the disease had rapidly increased so as to

give the patient the sensation as if the whole chest was filled by it; that the least motion had been insupportable to him, though altogether without any disposition to fainting; that on the preceding evening he had suffered excessive pain from coughing, in one convulsive effort of which he said that he felt something "crack;" that about eleven o'clock he took his usual anodyne, after which the cough ceasing he was able to recline in his accustomed manner, and had some sleep; that about four in the morning he awoke, again coughed, and sitting up in order to drink, suddenly exclaimed "I am gone," and instantaneously expired.

He was opened, in my presence, by Mr. Bush, July 11, at six P. M.

The body was perfectly free from putrefaction. From his having lain on the right side, there was more of ecchymosis there than on the left.

The right side of the thorax was evidently fuller and more prominent than the left, and about the connection of the third rib with the sternum, the skin was slightly œdematous, but not discoloured, and when cut through discharged a small quantity of serous fluid from the cellular membrane. The integuments were lined with a considerable quantity of fat, but the muscles were every where pale and flaccid. In the left side there were about eight ounces of serum slightly tinged with blood. Immediately under the upper part of the sternum there was an irregular dilatation of the aorta, beginning at its very commencement without the semilunar valves, and gra-

dually diminishing to three inches beyond the origin of the left subclavian artery. In its greatest diameter it was at least four inches. The cavity was lined with an accretion of the usual colour and lamellated structure, of about half an inch in thickness on the posterior part, where it was greatest, and gradually becoming thinner on the forepart, and on the right side. It adhered rather firmly all around, and within it there was some coagulum of recent blood, of which the upper surface was coagulated lymph. The substance of the artery itself was rugous, and much thickened, except, first, on its forepart, where it united with the mediastinum, through which there was an ulceration forwards to the sternum, which was internally carious in a small part corresponding with the attachment of the first and second ribs. This part of the sternum, therefore, formed the anterior boundary of the aneurysmal cavity. The aorta was also very thin on the right side; and here it was that it had given way in two small holes, situated near each other, from whence had issued blood into the right side of the thorax, amounting to about twenty-eight ounces of bloody serum, and by weight six pounds two ounces of a coagulum, red throughout, and not tough. The weight of the lamellated aneurysmal accretion did not exceed four ounces. The substance of the aorta was very carefully examined. There appeared in it no distinction of coats; nor was there any where any passage of the internal coat through the muscular and cellular. The whole was nothing more than a dilatation, the posterior part of

the artery being much thicker and stronger than natural, and the anterior being either removed by absorption, or so thinned as to be very easily torn. There was no ossification whatever in the aorta, or of the valves of the heart or arteries. The carotid and subclavian arteries were of the natural size. The heart itself was small, pale, very thin, and flaccid, with little blood in its cavities. It adhered compleatly and firmly all around to the pericardium, but without the least appearance of inflammation, whether old or recent, or any interposition of coagulated lymph. The pericardium was not at all thickened. The lungs were of a healthy texture; the right lobe entirely compressed by the extravasated blood, the left here and there slightly adhering to the ribs.

The stomach, pancreas, and spleen, were in the natural state; the liver rather large, pale, and in its substance comparatively bloodless. The gall bladder was small, distended with bile, and free from concretions.

Ossification and Dilatation of the Aorta and right Jugular Vein.—May 27, 1812. Peggy G., aged forty-two, who has not menstruated these nine weeks, began six months ago to experience violent difficulty of breathing on unusual exertion, such as walking up stairs, which was attended with palpitation of the heart, and accompanied with severe cough and copious expectoration. The dyspnœa has continued without intermission from that time to the present, but the cough has varied. Somewhat more than three months ago, she began to have a pulsating tumor situated just

above the right clavicle, with its anterior edge reaching nearly to the sterno-mastoid muscle, where it is inserted into the clavicle. It is soft, unresisting, and capable of being easily emptied by pressure. It seems as if one can trace the carotid all the way down before it to the clavicle, as not communicating with it. The pulsation of both carotids is very strong and hard; and on the left side, nearly in the same position as in the right, there is a smaller pulsating tumor, still somewhat behind the carotid, but not clearly unconnected with it; there is no disorder of the thyroid gland. Pulse 90, hard, and regular. For a fortnight past she has been unable to lie down in bed; and for about a month she has expectorated mucus suffused with blood. From the commencement of the malady, she has been unable to lie on the left side without a sense of suffocation. She makes a deep inspiration with ease, and without coughing; and the heart pulsates naturally, and to no greater distance than is usual. Somewhat before Easter she began to have oedematous swelling of the legs, which has now extended to the belly, in which there is, also, an obscure fluctuation. Urine not amounting to half a pint a day, and very high coloured. Tongue covered with white patches and slightly aphthous.

For two or three weeks past she has taken *Digitalis*, under the care of Mr. Norman, jun., who has also had her bled.

This woman has been twice married, but had no children, and has been much addicted to drinking.

During her fits of intoxication she has often been in a state approaching to delirium.

She died on the 6th of June, at three in the afternoon, without any other symptoms of disorder than a gradual declension of the general powers of life.

She was opened by Mr. George Norman, in the presence of myself and others, about four o'clock, P. M. June 7th.

The skin was all over more or less œdematous, and the legs and thighs were greatly swelled.

The tumor on the right side appeared to be owing to a sudden dilatation of the internal jugular vein, which extended up as high as its first valve, the dilated part being full of blood. The coats of the vein did not seem to be in any respect diseased, but its circumference in this part was two inches and a half, while that of the corresponding part of the left jugular was only one inch and a quarter. The right carotid artery was somewhat larger, and of a thicker and stronger texture, than the left; but in neither of these arteries, nor in the left jugular vein, was there any disease. The pericardium contained at least three ounces of clear fluid. The heart was considerably larger than natural, but its muscular substance was not preternaturally thick. The blood, being every where fluid, had run out when the heart was detached from the body for the purpose of a more accurate examination. The valves on the right side of the heart, as well as the mitral valves, were free from disease; but the semilunar valves of the aorta were unusually rigid, and there were considerable

flakes of ossification within the internal coat of the aorta, just without the valves, between the openings of the two coronary arteries; as likewise in some other parts of the arch. The substance of the aorta was thick and strong; but its dimensions were preternaturally great, its circumference just before the rise of the innominata being three inches and a quarter, and at its root, just above the semilunar valves, three inches and a half. The coronary arteries were free from disease, and perfectly pervious. There was little more than the usual quantity of fluid in the thorax; and some slight adhesions existed between the pleura costalis and pulmonalis on the right side. The lungs were firm, and within and without of a dark colour, as though considerably engorged with blood; but free from ulceration or inflammation.

In the cavity of the abdomen there was no appearance worthy of being remarked.

Diseased Aorta.—Mrs. H., a widow, aged between fifty and sixty, was for some years previously to her death subject to difficulty of breathing, unaccompanied by pain, but attended with a frequent action of the heart. The difficulty of breathing was much increased in foggy weather, and by any sudden exertion, as walking fast up stairs or up hill. Her pulse was regular. She could take a full inspiration without pain, or any apparent difficulty; and usually slept with her head little, if at all, elevated more than is common. In the beginning of January, 1812, she was much incommoded by indigestion and costiveness, which were in a few days removed by bitter aperient

medicines. On the 7th, she fainted two or three times without any apparent cause. In the evening Dr. Gibbes saw her, and with a view to relieve her breath, ordered a blister to be applied to her chest. On the 10th, unequivocal symptoms of pleuritis on the left side came on. Leeches were applied to the side; she was blooded, and took saline medicines in effervescence. On the 11th, the leeches were repeated. On the 12th, she was again blooded, and a blister was applied to the side. On the 14th, the inflammatory symptoms had subsided; but the difficulty of breathing, with a fluttering sensation in the the region of the heart, and considerable anxiety, continued.

This account was drawn up by Mr. Kitson, jun. with whom, and with Dr. Gibbes, I visited Mrs. H. on the 15th of January. The symptoms last described still remained. The pulse was soft, and little quicker than natural, but though not irregular as to time, was weak and oppressed, as if the artery was imperfectly filled by the systole of the heart. The anxiety and oppression about the thorax was so great, that she could scarcely bear the pressure of my hand on her side, while I made even an extremely imperfect examination, in which, however, I was able to discover a preternaturally strong diastole of the aorta. Her skin was cool, pale, and rather approaching to lividness. She had very little cough, and scarcely any expectoration; but talking was very painful to her. Her urine was sometimes turbid, at other times of a natural colour.

In this manner circumstances continued with occasional slight variations, under various remedies, till the 20th, when she died like a person suffocated, but with the free use of her senses.

On the following day she was opened by Mr. Geo. Kitson, in the presence of Dr. Gibbes and myself.

In the thorax there was no effusion, or any existing inflammation; but there were adhesions between the pleuras on the left side, from inflammation which was past. The lungs were free from disease. The heart was rather pale, and thick, but not enlarged. The left ventricle contained a considerable quantity of black grumous blood. The valves were all in a natural state. The aorta, from its rise from the heart to the branching off of the three first arteries, was very much dilated, so that a circle cut out near the semilunar valves, and slit open, shewed the circumference to be three inches and three-eighths. It had the usual texture.

In the cystic duct there was a gall-stone, which totally precluded all communication with the gall bladder. The gall bladder was thickened like the urinary bladder in cases of old and excessive stricture of the urethra. It contained no bile, but was full of a fluid resembling a thick solution of Gum Tragacanth slightly tinged brown.

All other parts had their usual healthy appearance.

The following appears to me to be the theory of Mrs. H.'s case. The dilatation of the aorta had probably long existed, and given occasion to the necessity of an unusually strong action of the heart

in order to overcome the resistance of a preternatural accumulation of blood in that artery. When therefore the blood was urged still faster than was natural into the heart by muscular motion, the heart was put to the necessity of still stronger exertions, which it probably made ineffectually, and therefore the blood was imperfectly thrown out of the left ventricle, and by the usual routine made respiration quick and difficult. Afterwards, by the pleuritic inflammation on the left side, respiration becoming habitually difficult, the blood was not properly acted on by that process, or, according to the common theory, being only suboxygenated, had lost the power of stimulating the left ventricle sufficiently to overcome the preternatural resistance of the aorta. Hence black blood stagnated in that ventricle, and the patient died very suddenly, like a person hanged or drowned.

Mr. Hunter mentions the aorta, half an inch above the valves, to have been two inches and three quarters in circumference. Mrs. H.'s, in the same place, was three inches and three-eighths. A most material difference.

Remark.—It seems as if there was some connection between dilatations, or accumulations of blood, in the heart, or aorta, and the right hip. A pain in the latter part occurred in the case of ———, in aneurysm of the abdominal aorta; and in that of Mrs. W., who had a fatal ossification of the semilunar valves of the aorta. The same symptom was observable in the case of Lady C., who had long laboured under organic disease of the heart, with

frequent oppression of that viscus, and occasional irregularity of the pulse; and who, in a more violent seizure of this malady, apparently accompanied with inflammation of the part, often felt the pain in the region of the heart strike, as she called it, to the superior part of the os ileum on the opposite side.

Difference between Induration of the Semilunar Valves of the Aorta, and of the Mitral Valves.—In the latter, the left auricle is expanded and thin; the blood stagnates in the lungs; the countenance is more or less livid; a fluttering of the heart, perceptible to the hand on the outside of the chest, takes place even at rest; and the pulse is irregular. These symptoms are greatly enhanced by exercise, which also aggravates a difficulty of breathing, and sense of suffocation, which are more or less constant. The patient suffers occasional fits of these distressing symptoms, even when at rest. When most free from them, he can lie in the horizontal posture, and even on both sides, though chiefly on the back, somewhat inclining to the right. The pulse, besides being irregular, is usually somewhat quicker than natural; and during the paroxysm is more obscure, and for the most part slower, than at other times. A vibratory motion of the heart is perceived, when the hand is placed on the left side of the thorax. A cough, with expectoration of mucus, sometimes occurs, and when it exists, especially if accompanied with hæmoptysis, in some degree relieves the other symptoms.

In the former disease, the pulse is irregular, and the symptoms are rather those of syncope than dysp-

nœa. This arises from the interposition of the left ventricle, which admits of some permanent or temporary dilatation, and therefore does not throw the congestion so much on the lungs. On this account the dyspnœa is not so much aggravated on exercise, and the countenance shews little, if any, lividness. There is no difficulty of lying down, or of making a deep inspiration.

These are the circumstances when the several maladies are pure and uncomplicated.

In both cases, from want of sufficient impulse of blood by the heart, the extremities may be cold, and syncope, even to a fatal extent, may ensue.

The more common consequence, however, of both maladies is serous effusion into the thorax, pericardium, or both.

A complication of the different states, especially if concurring with obstructed coronaries, and enlarged aorta, may produce complicated symptoms, varying according to the predominating degree of the several states.

Diseased State of Femoral Artery.—Joseph B., aged forty, who, in the spring of 1809, had strained his hip and thigh in the exertion of lifting or carrying a heavy weight, was admitted into the Bath General Hospital, on the 12th of August, for a complaint which was supposed to be “a rheumatic affection principally confined to the muscles of the left leg, and incapacitating him from following his employment;” and he was said to be free from fever.

He had not used the bath more than once or twice

when a mortification was perceived in his foot, which gradually spread, and extended itself upwards, so as, in the opinion of the Surgeons of the Hospital, to admit of no chance of life but from amputation. The report of his state on that day, October 31st, is as follows :

Edges of the mortified parts of a better colour than they were. For some days there has been a slough on the skin, corresponding with the tuberosity of the left ischium, which, however, may be attributed to the constant pressure ; and there have been inflamed sloughy spots on the same knee. All his limbs are very much reduced in size. Skin of a moderate heat. His appetite is tolerably good ; and he sits up in bed without faintness. Pulse upwards of 108, and tolerably full.

He takes every day a strong decoction of Angustura Bark, three drachms of yellow Bark, six grains of Opium, some red wine, and about a quart of porter and strong beer.

It was determined to amputate the limb above the knee, which was accordingly done by Mr. Tudor, between twelve and one o'clock. Previously to the operation, notwithstanding the extenuation of the limb, the trunk of the femoral artery was scarcely discoverable by pulsation, and in the divided arteries there was little pulsation or hæmorrhage. The muscular substance was flabby, and of a brownish colour. The man bore the operation well, and the pulse in the wrist suffered no change.

Three grains of Opium were immediately given ;

the wine and strong beer were taken away; and porter was ordered, together with one drachm of yellow Bark every three hours.

The amputated limb was examined. The artery, vein, and nerves, were traced, and dissected out from the spot operated on to the mortified part. The veins were in a natural state, containing some fluid blood. The artery, throughout its femoral and popliteal portions, was contracted below its natural diameter, containing coagula of different lengths, of uniform texture and colour, exactly similar to those in aneurysms included in a sort of lighter coloured crust, like coagulated lymph, lining the inside of the artery, but not attached to it. These morbid appearances ceased above the division of the crural artery.

In the evening of the operation, the pulse, which before had been uniformly quick, came down to about 88 in a minute. The following was its state on the succeeding days:

November 1.	A. M. 108.	P. M. 108.
———— 2.	A. M. 130.	{ and weak. P. M. 116, and strong.
———— 3.	A. M. 180.	P. M. 108.
———— 4.	A. M. 92.	
———— 5.	A. M. 90.	
———— 6.	A. M. 92.	{ No pulsation in the right wrist.
———— 7.	A. M. 84.	{ and pretty full in the right wrist, though less so than in the left.

November 8.	A. M.		{ No pulse in the right wrist.
———— 9.	A. M.	96.	{ and moderately strong in the right wrist, though less than in the left.
———— 10.	A. M.	—.	{ P. M. No pulse in the right wrist.
———— 11.	A. M.	—.	P. M. 98.

On different days he had frequent hiccups, and was at times delirious. He occasionally complained of considerable pain in the stump, which in no degree united, but retracted and dissolved away from the bone. The first slough on the nates put on the appearance of healing; but another of much greater extent occurred, and was in an increasing state. The bowels were rather bound, but gently opened by glysters. His tongue was constantly dry, and his urine in large quantity, and of the natural colour. On the 10th, he had a shivering fit, succeeded by very little heat. Through the whole period subsequently to the operation, he took large quantities of Bark, fermented liquors, Opium, and the most nutritious food; but no drink was so grateful to him as cold water. The Opium kept him for the most part in a state of drowsiness.

On the 12th, at night, he died very quietly.

Dissection.—The artery was very much thickened and contracted all the way to the groin. It contained a little blood, recently coagulated, and separated into cruor and lymph. The inguinal

portion had in it an old coagulum of the aneurysmal appearance, such as before described. Higher up, in its external iliac portion, about two inches and a half below the division into external and internal, and just corresponding with the situation of Paupart's ligament, the cavity, for three-quarters of an inch in length, was entirely obliterated by a coalescence of the sides, which would not admit of separation by the point of a probe. Hence it is evident that not the smallest portion of blood could have passed that way. The part above, up to the division, was in the natural state, as was also the internal iliac, which was in no degree dilated beyond its usual capacity. The vein had no appearance of disease, and contained some fluid blood.

The arterial system of the same parts on the right side was in every respect natural.

Case of dilated Carotid, &c.—Oct. 20, 1800. J. W. esq; aged fifty-two, tall, and rather a full habit; fair hair; not accustomed to violent exercise, but to a sedentary life, for several years, on going quick up stairs, has been affected with beating in his head from the heart, with acceleration but no irregularity till July last. Has been subject to nervous lowness in a considerable degree, especially eight or ten years ago. Head confused, and absent at times, occasionally drowsiness and uneasiness, but no direct aching. About the beginning of September last had an approach to giddiness in walking, as if produced by the shaking of the step. Pulse 52, and hard, but regular while sitting. It sometimes, however, beats three or

four quick strokes, followed by a stop. At other times at rest, Pulse only 30 or 40, and proportionably strong: it used to be about 70 or more. Exercise always quickens it. Almost every night since July, about two o'clock, sometimes as late as six, is waked out of his sleep with horrid dreams, and palpitation of heart, and irregular pulse, which gradually moderates, and then he goes to sleep again. Does not know that he has it without dreaming, or rather, as he says, seeing a vision, every thing being so perfect. He has no necessity for rising up, and no dyspnœa. Has been subject to difficulty of breathing, supposed from asthma in summer, that has gone off, with a spitting of an occasional lump of mucus, in about three weeks. His father and brother subject to asthma. Both carotids full. The left is extremely dilated and hard relatively to the other, and to what it should be in a state of health. On pressing strongly with the thumbs there seem to be strokes, the lower side pulsating half a second before the upper. This is felt only on the left, and on hard pressure; and the interval is less, when the action of the heart is quickened by exercise. Lying on the left side, the jerk of the heart is felt more. Thirty-two years ago had a slight paralysis on the whole of the left side. Bowels rather open, but sometimes bound. Digestion very good. Never had gout, or rheumatism, or breaking out. No pain in the back or loins. No pulsation is any where to be felt by the hand in the thorax or abdomen at rest; but about the heart on motion. For many years past he has

had beating in his head in the morning. Urine, he says, rather pale. More than four or five glasses of wine aggravate the feelings in the head. Has occasional piles.

I fear this dilatation of the left carotid is only an evidence of similar mischief in some part of the aorta or subclavian artery.

Directions in a case of dilated Carotid, &c. in a letter to J. W. esq.—Oct. 20, 1808. With regard to diet, I think it essentially necessary that you should wholly abstain from spirits, and every species of fermented liquors without distinction. Your drink may be plain water, toast and water, teas of all kinds, weak cocoa, milk and water, all cool, and not drunk in large quantities at once. Meat and all animal food should be eaten in a considerably less proportion, as for example, only half of what you have been accustomed to take, and never more than once a day. The food in general should be less than the appetite demands; it should be well chewed, and swallowed slowly, and you should on no occasion admit of a long interval between your meals. There is one rule which I would wish you uniformly to observe, which is, never to drink till you have done your dinner. Salmon, shell fish, meats either very fat, fried, or hardened with salt, much pastry, sugar or butter, rich soups, mushrooms, and salads, should be avoided. The tendency of these restrictions is to produce the important effect of diminishing the fulness of the habit. They also go in part to the establishment of another point not less important, which is, the removal of all

those means which unduly stimulate the heart and arterial system. With this view you should sedulously avoid all violent exertions of the muscles, in excessive walking, riding, lifting weights, or even long or loud speaking—exertions which are peculiarly injurious after meals, or when you are exposed to the heat of close rooms, or of the summer's sun. All considerable heat should indeed be avoided, as of itself tending to increase the circulation beyond its just bounds. At the same time particular care should be taken to prevent the body, and more especially the lower limbs, from being cold, by defending them by proper clothing against cold weather and moisture. With this view I would recommend you to wear calico shirts, and thick worsted stockings, whatever other stockings you may occasionally put over them. In cautioning you against exercise, I only mean that which is violent, such, as hard riding, walking up hill, or fast up stairs, or on plain ground, &c.; but I do not object to your riding gently, or walking on plain ground in a moderate pace; both these kinds of exercise being conducive to health, and the latter more especially tending to promote circulation and digestion and to warm the feet. Exercise of this latter kind should therefore be habitually taken; and, on the contrary, long sitting should be avoided.

Late hours, and strong mental emotions, are in your case extremely injurious. In these measures I wish you for a long time to persevere. Nothing can arrest the progress of this disease, and enable the heart and large vessels to resume their healthy func-

tions, but removing plethora, and abstracting general stimuli. With this view I would recommend that four ounces of blood should be taken from the arm in two teacups; and that the medicines in the annexed prescription should be regularly given, increasing or diminishing the proportion of the Aloes, so as that the bowels may be gently opened once or twice a-day.

By a letter dated Nov. 22, 1808, it appears that Mr. W. "was materially better. His pulse nearly "regular, his breathing more free, the urine rather "increased in quantity, and his bowels kept open. "He was not so drowsy, and was more able to perform "his usual avocations. The pulsations did not annoy "him much, although he sometimes feels the beating "in his head."

April 19, 1809. His medical attendant writes that "Mr. W.'s health is very much improved, and "that he adheres very nearly to the regimen advised. "He very seldom complains of any of the symptoms "he had when he consulted you; indeed he is better "than he has been for many months past."

February, 1813. This patient again called on me. He had continued to occupy himself with a very fatiguing yet sedentary profession, and had in a great measure neglected the means which I had formerly recommended to him, eating full meals of animal food, and drinking wine, though in moderate quantity. He was now labouring under those complaints which are called Nervous, having various uncomfortable feelings about his head, with disturbed nights, and great depression of spirits. Among other symp-

toms, he had for some time suffered a singular deprivation of the sense of hearing. Any loud musical sound, as of bells, appeared to him to be double; and he observed that to his left ear it appeared somewhat more than a semitone lower than to his right. It was in the left ear that he had been accustomed to experience the rushing sound, and the left carotid had been dilated. On the present occasion, the pulsation of both carotids was much alike, and considerably stronger than natural.

Obliterated internal Jugular, and Death from Schirrhus in Trachea.—September 26, 1811. John M., aged sixty, a labourer, has a swelling in the middle of the right side of the neck, beginning about two inches behind the sterno-mastoid muscle, and extending about an inch before it; and reaching upwards from an inch and a half above the clavicle to half an inch below the angle of the lower jaw, involving in it the sterno-mastoid muscle, and going deep within. It began about two months ago so far as he perceived; is hard; and has very much increased within these three weeks, that he has been a patient of the Casualty Hospital. He had no pain in it at first, or at any period since, and there is little soreness on pressure. For these two months he has been affected with a throbbing pain across the forehead, and crown of his head, down to the ear on the right side with some sleepiness and swimming, so that in walking he reels like a drunken man. Has had a great hoarseness for a year, attributed to having been wet through; and for three months has totally lost his

voice, speaking in scarcely any thing above a whisper. His respiration is difficult. He says that he has always coughed, but not more since his complaint; and I observe that he occasionally hawks up phlegm. His throat is not sore, his appetite is good, and he tastes and swallows well. Pulse 96, and weak. Bowels open. Sleeps well, except when prevented by the headach.

He has been blooded and purged, and had an open blister on the swelling, without any diminution of the difficulty of breathing or loss of voice.

On the 6th of October, his breathing was become more difficult than before, and a wheezing sound, which had of late accompanied it, was increased. He complained of the great exertion which was required for him to draw his breath, saying, "that he felt as if a cord was drawn tight round his throat." The pain in his head was also become much more violent. There was, however, no sensible increase of the tumor. He could not lie down above half an hour at a time; passed a restless night; and in the morning his breathing was still more difficult, so that, in the hope of relieving himself, he passed a candle down his throat. He then lay down on his bed, and shortly afterwards died. His body was examined, a few hours after death, by Mr. George Norman. The skin on the most projecting part of the tumor adhered so closely, that it was with difficulty separated. The external jugular was of its natural size, and crossed the tumor. The whole of the sterno-mastoid muscle, except its insertions, was buried in the tumor. The

tumor itself, with the parts connected with it, together with the tongue, larynx, trachea, œsophagus, and the blood-vessels of the opposite side, were removed from the body, and the examination continued by dissecting the parts from behind. The tumor was seen at its posterior part to commence from the division of the arteria innominata into the right carotid and subclavian, between those arteries, and to extend upwards on the outer side of the carotid to a little below its division, so as to be three inches in its greatest breadth without the carotid. The common trunk of the carotid, for the space of an inch, a little below its division, was imbedded in the tumor to about two-thirds of its circumference; and at that part, through the same length, the par vagum was totally lost in the substance of the tumor. A part of the tumor, extending inwards towards the larynx, involved in it about an inch of the internal carotid, after its division; but no part of the canal of the carotid was obstructed. The internal jugular vein was lost through the whole length of the tumor, and could only be perceived entering at its superior, and coming out at its inferior, part. This vein was totally impervious throughout the imbedded portion, and for about a quarter of an inch immediately above, it was a solid cylinder; but above that, and from below the tumor into the superior cava, it was pervious and in a natural state. The intercostal nerve entered behind the carotid into the upper part of the tumor, in the substance of which it was lost.

The tumor was unequal in its surface, and was

almost cartilaginous. It neither adhered to the larynx, nor appeared to make any pressure on it. The larynx being more minutely examined, the rima glottidis was seen to be completely closed on the right side by a projecting substance; and so narrowed on the left, as to be capable of admitting only a probe. The larynx, when cut into, was found to be nearly filled by a scirrhus projecting from the inner side of the posterior part of the thyroid cartilage, and extending, but not adhering, to the anterior part of the larynx. The right arytenoid cartilage was much thickened, apparently by scirrhus.

The head was opened. The only morbid appearances were, an effusion of serum between the tunica arachnoides, and pia mater, on the former some small opake spots, particularly visible about the vertex, and a more than usually watery state of the whole brain.

Loss of Pulse in one Arm.—Mrs. F., aged about forty, the mother of many children, long accustomed to self-indulgence and indolence, and therefore to various nervous affections, was, in the month of May 1809, afflicted with a violent cough and dyspnœa. with a pain in the right side, an expectoration of frothy mucus, and a very quick and rather weak pulse. A blister was applied to the right side, a pill with a grain of Digitalis was given twice a day, with two table spoonfuls of an effervescing mixture, containing about three grains and a half of fresh Squill in each dose. By the 6th of June, she had taken fourteen pills, with about fifty grains of the Squill. June 7. For these two days her pulse has been

about 70 : to-day it is 72, and somewhat irregular. For several days past her bowels have been open twice a day. Tongue clean. Cough and other former symptoms nearly gone. The whole of yesterday she complained of violent headach, and slight giddiness on motion ; but she has less of both to-day. Yesterday, at noon, she was seized with a violent throbbing pain in the tips of the fingers of the left hand, as if they were about to suppurate, with great soreness, but no swelling or redness. This affection continued for twelve hours, without any change in the pulse ; when suddenly there came on a numbness or feeling of sleepiness in her fingers, so that a slight touch could not be perceived, but a stronger was painful. There was no want of motion in the part ; but the hand was cold, no pulse was to be felt in the radial artery, and pressure on the wrist produced slight ecchymosis. The hand was put into hot water and rubbed ; soon after which the sensibility and warmth returned, the tenderness went off, and the pulse was restored, though in a weaker degree than was natural. She went to sleep, and awoke between two and three in the morning with violent aching pain in her arm from the elbow down to her fingers' ends, accompanied with great tenderness on pressure. At this time, the hand and fingers down to their points looked slightly livid, and are rather cold. No pulse is perceptible either in the radial or ulnar artery, though there is evidently in the veins on the back of the hand blood, which being pressed backwards towards the points of the fingers, is seen to return

quickly upwards when the pressure is removed. The pulse in the right hand is natural ; and that of both carotids, full and strong. There is no swelling of the arm or hand, or any appearance of inflammation. The fingers in some degree tingle, but have in them little sensation on strong pressure. It is not improbable that a soreness which exists from the fingers upwards may have been owing to the strong friction which was employed last night. The motion of the arm is weak. The application of warm water produces uneasy sensations in the hand. Her feet are not affected.

Let the bathing be frequently repeated for a considerable time together.

June 8. During the afternoon the pain in the hand was occasionally very violent, and she dozed at times in the night, but for two or three hours together, she had violent pain from the wrist downwards, the part being perfectly cold, but appearing very hot to herself, and almost insensible to pressure.

The hand is now cold, but not icy or sweating, and the back of the hand and wrist are marbled with many purplish and pale livid spots or patches of irregular forms, which are evidently deep ecchymoses. The fingers very suddenly become much less livid than they were, and the veins are apparently fuller of blood. There is, however, no pulse in the wrist, and when the veins on the back of the hand are emptied by stroking them downwards, as soon as the pressure is taken off, the blood visibly only creeps on, returning with not a fourth part of the velocity with

which it moves after a similar experiment on the veins of the other hand. There is no perceptible pulsation in the left axillary artery: that of the left carotid, strong and bounding. Pulse in the right radial artery 56, sufficiently strong and regular. Tongue clean and moist. Cough and expectoration nearly gone. General heat of the skin natural. No sickness. She has at times a good deal of giddiness and pain in her head, especially on sitting up.

June 9. Sitting up in an adjacent room, by the fire. She had a very bad night, from pain in the arm from the elbow down to the wrist; together with great coldness in those parts, and still greater from the wrist to the fingers' ends; in which the sensibility is still very much impaired, though from the wrist upwards it is much in the usual state. Fingers and nails rather livid, but rather less so than yesterday. Pulse in the right radial artery 112, full, tolerably strong, and perfectly regular. Veins on the back of this hand full; and when the blood is stroked away, it returns with the usual velocity. There is no pulse in the left axillary, radial, or ulnar arteries; but the veins on the back of the hand are fuller than they were, and when the blood is stroked down, it seems to return with the natural velocity. Various ecchymoses of a dusky red colour continue on the back of her hand and wrist. Heat of the palm of her right hand exactly 98; that of her left 95,3. Pulsation of both carotids full and strong. Respiration 32. According to the report of her husband, before she got up to-day her pulse was very irregular.

She complains of swimming before her eyes, but has no headach or sickness. Yesterday, with her cough, she had a good deal of expectoration. Bowels open. Urine rather high coloured.

June 10, half past one P. M. In bed. She has had a very bad night from pain in her wrist and fingers, which is deep seated, and of an aching kind. Her wrist is very sore to the touch, but I find that her fingers only are quite insensible. This has probably been the case from the beginning, though I have not been before able to elicit the truth. There are, on the back of the hand, wrist, and up the arm, various additional ecchymoses of irregular forms, and of a dull red colour. Pulse in the right radial artery 80, full, and occasionally intermittent. None in the left extremity; but the veins on the back of the hand are fuller and broader than before, or even than those of the other hand, though the return of blood by the method before indicated is visibly slower than natural, though not so much as at first. Hand apparently somewhat warmer than it was. Last night she was hot and feverish; but I find that for two days she has eaten fowl, with veal broth. She coughs frequently, and expectorates a good deal. She has a considerable degree of pain across her forehead, but less giddiness. Two motions.

℞ Syrupi Scillæ ʒj.

— Papaveris ʒss. M Sum' ʒj ter die ex aquæ cochlearibus duobus amplis.

Let her abstain from meat.

June 11, one P. M. In bed. Her night was

somewhat better than the preceding, and she coughed less, but had a great deal of deep-seated gnawing pain in her wrist and fingers, and it now extends up to the shoulder. Pulse in the right radial artery 72, rather hard and full, but intermittent; and very distinct in the axillary artery of the same side. In the left axillary there is only now and then a beat; in the subclavian a very obscure pulsation, evidently less frequent than in the right radial. In the left radial no perceptible pulse; but the veins on the back of the hand are fuller than they were, though not in a degree equal to the right, and the blood returns with velocity after the veins have been emptied. The hand is warmer than it was. Skin in general of moderate heat. No stool to-day. Tongue clean and moist. She has no giddiness, but a good deal of pain and weight in the front of her head. On the whole she is improved in strength.—*Pergat in usu Syrupi. Horâ somni sumat Tincturæ Opii gutt. x.*

June 12, half past three P. M. Sitting up in a room next her bedroom, by a fire. She had a motion yesterday, but has had none to-day. Her night was somewhat more quiet, though she did not take the Tincture of Opium; but she continues to have pain, though in a somewhat less degree, and only in her wrist. The old ecchymoses continue, but there are no new ones. The fingers remain stiff, and therefore difficultly moveable. Her hand is warmer than it was. According to the report of her husband, while she was preternaturally hot last night, she had some degree of pulsation in her left wrist; but there

is none at this time, and her skin in general is tolerably cool. Pulse in the right radial artery 116, and regular, but weak. She has somewhat more than usual of pain in her forehead, but no giddiness. Her tongue is clean; her appetite in due degree for a person under confinement; and she continues to gain strength.—*Persistat in usu Syrupi.*

June 14. In bed, sitting up. Having had no motion for two days, she took last night a table spoonful of Castor Oil, and a glyster this morning, which operated once. For this reason she has discontinued the syrup ever since twelve yesterday. For these two days she has been hot and feverish; more especially last night, notwithstanding which she slept well. Her cough yesterday was very bad, and has continued almost incessantly to-day, and she has expectorated a good deal of frothy mucus, mixed with somewhat of a different consistence, and of a pale saffron colour. The pain in her hand gave place to numbness yesterday morning, and has not since returned. There is no feeling at all up to the knuckles. Skin hot. Pulse in the right radial artery 114, hard, and regular. Respiration from 28 to 30. In the left radial artery the pulse is still wanting; but the veins, though not so much distended as in the other hand, look tolerably full, and the heat is greater than it was, though not equal to that of the right.—*Sumat Misturam effervescentem è Potassæ Carbonate sine Scillâ.*

June 16. Sitting up in the room adjoining her bedroom. Her cough was very bad the night before last, with feverishness and great expectoration, and

her breathing yesterday was very laborious ; but last night she was better. She has frequent cold shiverings. No motion yesterday ; a small one to-day. Pulse in the right radial 124, and regular. Respiration 36. A little pulsation is now and then perceptible in her left wrist. Her hand is warmer. The pain and soreness of her wrist continue much lessened ; but she has no sensation in her fingers, even when, as she says, a pin is run into them.—*Sumat ter die Misturam è Potassâ cum Scillæ 3ss.*

June 18, six P. M. She slept ill the night before last, but very well last night. Her cough is considerably better, and her expectoration diminished. Yesterday four motions ; two to-day. She has been occasionally sick, and her head has ached a good deal. In the left hand, from the knuckles upwards, she has at times had considerable pain, deep seated, and as it were in the bones. Pulse in the right wrist 72, and irregular. The left hand is colder than it was, and I can perceive no pulse in either of the arteries at the wrist ; but the movement of blood in the veins on the back of the hand is tolerably good.—*Pergat in usu Misturæ.*

June 20, half past three P. M. She has continued to sit up in the room adjoining her bedroom. The night before last she was much disturbed by cough, and violent pain in her hand. Last night was better. The cough and spitting are very much diminished. She had yesterday a good deal of sickness. Her bowels have been open once each day. She has considerable pain in the ball of her thumb, but her

fingers, and the two last joints of the thumb, continue insensible, and she has a very imperfect use of them. The whole hand is cold, and still without pulse. The right is warmer, and the pulse 124, weak and regular. She seems stronger, and thinks herself better.—Sumat Misturam 4^{ter} indies.

At half past ten at night, Mrs. F. complained of sickness, and a desire to go to stool; and while she was on the night chair, without effect, she suddenly exclaimed “Oh!” and falling backwards died with apparent suffocation, but without any convulsions.

Her husband having assented to an examination of the body, she was opened the next day by Mr. Geo. Norman, whose account of the dissection follows:

“I dissected the left brachial artery to the division,
“and the radial to the wrist, and removing them
“from the arm, opened them through their whole
“extent, but found no obstruction or unnatural
“appearance; there was no tumor or obstruction in
“the axilla, or any defect in the vessels given off at
“the arch of the aorta. The cavities of the heart
“were empty, and perfect in their structure; the
“valves all natural. The left lung was free from
“disease, though perfectly distended with air; but
“on the right side of the thorax there were adhesions
“of the pleura, and tubercles in the substance of the
“lobes. There was also an appearance of purulency
“in the branches of the bronchia.

“The abdominal viscera were perfect.

“The vessels of the dura and pia mater were not
“uncommonly distended. There appeared to be

“some serous fluid between the latter membrane and
“tunica arachnoides, at the summit and basis of the
“brain. The whole brain was softer and more moist
“than common; but the ventricles did not contain
“more than the usual quantity of fluid.”

Loss of Pulse in one Artery, or set of Arteries, only.—March 18, 1803. Mr. Charles B., aged eighteen, after having for several months laboured under hectic fever, with symptoms of atrophy, from mesenteric obstruction, was two months ago seized with hemiplegia on the left side, accompanied with pain over one or both of his eyes. At that time, I am assured, the pulses in both wrists were alike; but when, a fortnight afterwards, he went into a very warm bath of unknown temperature, he immediately lost all pulse in the left radial artery, which, however, gradually returned; but is now much weaker than in the other wrist, in which the pulse is 100 in a minute, full, and very bounding.

Evidence of an Operation on Parts through the medium of Nerves, different from that of Chemical or Mechanical Stimuli.—If you irritate the nerves leading to the heart, you cannot produce any contraction in the heart. So also with regard to those supplying the arteries. Yet certain affections of the mind will immediately influence the motion of the heart and arteries; and so will other affections of the brain. In Mrs. M., an old woman, for six years that I attended her, the pulse was only 24 in a minute, during which she walked about and visited in a moderate degree. Whether this immediately followed a

slight affection of the brain, tending to apoplexy, in which I first attended her, and which left no paralytic symptoms, I cannot tell. In a pleurisy, in which she was after affected, and which required two or three bleedings, the pulse rose to 60. From this attack she recovered. When she died, a great deal of serous extravasation, and of wateriness, was found about the brain, which was probably the cause of the slow pulse, conformably to what always happens in certain stages of hydrocephalus internus.

Pulse lowered by Hæmoptysis.—Miss F. W., Nov. 28, 1811, spit a great deal of blood on Monday the 18th, after a quick pulse of many days, and a dry cough of several weeks, in which, five weeks ago, there was also much spitting of blood. Her pulse came down to 64 after the spitting, and never exceeded 72 till this day (29th), when it is 64. She was blooded the day before yesterday, and her blood cupped very much, almost to the size of a sixpence, in a four-ounce teacup, with a thick crust of coagulated lymph, and was very tough. Coughs a great deal at night with previous wheezing, and spits eight or ten times thick opake fluid of an uncertain kind. No pain about the chest. Never any rigors, but usually sweats at night.

Miscellaneous Remarks on the Pulse.—In Mrs. P. I felt the pulse in the radial artery continue for full ten minutes after respiration had totally ceased, and all other appearance of life was gone.

In *Phthisis Pulmonalis*, the breath becoming more oppressed, and the head delirious, and strength dimi-

nished, the pulse often is slower and apparently better than before; a very short time, perhaps three or four days, before death. E. G., Mrs. L., Mr. S. S. &c.

The pulse in Mr. P., two days before death, was exactly like balls successively impelled through an elastic and yielding tube. This was the greatest degree of the hæmorrhagic, gouty, or dropsical pulse I ever felt. Dec. 1808.

The *preternatural slowness of pulse*, after the heart during fever has suffered excessive action, is an evidence of a similarity of affection to muscles of voluntary motion, which are disposed to quiescence after violent fatigue. Syncope after excessive arterial action is of the same nature.

Quere on Pulse.—If a person is better when his pulse becomes better, is he better because his pulse is better, or is his pulse better because he is better?

Obstruction of Blood in the Veins.—It is natural to suppose that if any obstruction to the free passage of the blood takes place, it must peculiarly occur in the veins. An increased action and consequent debility of the arterial system will therefore, probably, be the consequence of its effort to propel it. Now exercise, by acting immediately on the veins themselves, drives forwards the blood they contain, and therefore prevents the necessity of increased action or dilatation of the arteries; and therefore their indirect debility, and the diseases consequent on it.

Inanition, effects of, on Pulse.—In Mr. A. emaciation from disease of colon, stomach, and mesenteric glands, with vomiting occasionally: pulse quick on

exertion ; when at rest pulse 72 ; respiration 18, in a horizontal posture ; a proof that emptiness does not necessarily produce quick pulse.

So in Mr. G., atrophy, with contracted but not otherwise diseased stomach, and constant vomitings, the mesenteric glands all scirrhus, pulse 64.

Loss of Power in the Heart.—In order to see whether in apoplexy the heart loses its action only by the diminished power of respiration, it is necessary to observe whether its action becomes proportionably greater or less to that of the respiration in such cases, than in that of health.

CANCER.

Cancerous Habit, theory of.—Is not this merely a disposition to want of contractile power in the vasa vasorum throughout the system, shewing itself especially in the glands; in consequence of which an accumulation of blood takes place in them, and consequent extravasation and scirrhus? This extravasation may take place from the common vis a tergo; but is more likely to arise from some increase of action in the neighbouring arteries, acting as local and petty hearts, as in the ordinary cases of boils, &c. not affecting the general circulation; or more especially from an increased action of the heart and arterial system in general, all vires medicatrices to remove retardation and accumulation. Hence the constant fever, emaciation, &c. When by these means the part is become scirrhus or dead, the lymphatics begin the process of absorption by ulceration. If previously to this ulcerative process, the morbid accumulation or disposition is confined to one part, the disease is local; and if the part is removed, before the increased action of

the arterial system in general has brought on weakness of a similar kind in other vessels, (quere as to the admission of this argument, or at least as to the explanation and qualification of it, conformably to the known or probable excesses of vires medicatrices, as in producing effusions, suppuration, &c.) no ulceration, and, of course, no accompanying or symptomatic deleterious processes, will take place. Where, also, there is a strong general predisposition, that is, an existing weakness merely bordering on disease, in the vasa vasorum in general, the local disease, especially when it has gone to the extent of ulceration, may abate the general predisposition, through the means, well known to exist in other cases of disorder, of local determination or evacuation. Hence the existence of such a local disease prevents the appearance of it in other parts; but if it is removed, as in Dowager Lady F. the constitutional tendency more immediately takes place, or sometimes other local affections occur. It seems, then, that the benefit of extirpation is to prevent the fatal effects of the ulcerative process, but that it will not remove, and perhaps rather tends to aggravate, the general cancerous affection. The local discharges, and even the periodical discharges, of blood in such cases, seem rather to prolong life, by removing the general cancerous disposition; and when they cease, they are connected, either as causes or effects, with the aggravation of the general disorder, or the failure of the vital powers. How are we to explain the spreading scirrhosity following the ulcerated surface?

It is probable that the ulceration, so far as it goes, tends to diminish, though it cannot wholly remove, the spreading scirrhus which borders it.

Cancer (scirrhus) occurs in conglomerate glands, as the breast; in membranous and muscular parts, as the stomach and the lips; in skin, or at least cellular substance, as the nose. How is the womb to be arranged? Even conglobate glands, as in the axilla, even before suppuration, and therefore not from absorption. It is apt to occur to women after the cessation of the habitual depletion of menstruation.

In the stomach it seems in Mr. B. and Miss S. to have arisen from great mental anxiety, which we know has the power of producing great irregular vascular determination.

It often follows a blow on the breast.

All these causes are such as dispose to inflammatory affection in the habit or in the part.

Cure of Cancerous Habit.—Vegetable diet, and that in small quantity. The abstraction of stimulating food and drink. The abstraction of preternatural heat, by moderately cool clothing, avoiding fires, and certain kinds and degrees of cold bathing. By blood-letting in small quantities, frequently repeated. By issues. By purging. By sedatives, as cold drink, saline medicines, Squill, Hemlock, Aconite, Hyoscyamus, Digitalis, Acids when they agree with the stomach; Lead; Muriate of Barytes; Muriate of Lime; Zinc.

Cure of Local Affection.—By leeching; application of sedatives and refrigerents, as lead, cold liquids, and poultices frequently renewed, so as to keep the part

wet; deep scarifications in the sound part round the scirrhus; quere, Ice? and all the means of a constitutional kind before mentioned.

Scirrhosities of Mammæ, &c.—They are, probably, slow extravasation of coagulable lymph from the vasa vasorum, producing general adhesions of the whole substance without new vessels, as in common adhesions, and therefore making the part dead so as to be carried off by ulceration.

Could their progress be prevented by deep scarification and application of ice, or poultices, with cooling mixtures?

Milk, breast, and other inflammations end in common suppuration, because the state of inflammation is different; vascularity remaining, and not affecting the whole breast, but only a part: arising from determination of blood, without the natural drain of discharged milk, the child not being allowed to suck; and the nipple sore.

Cancerous Scirrhus.—In Mrs. I. the application of a piece of black silk spread with Mrs. Plunkett Edgcumb's composition, and extending a small space beyond the limits of the scirrhus, was kept on with one change for about three weeks, producing a heat of the part, a considerable pungent pain, and some symptomatic fever. Then the plasters were taken off, and poultices of bread and milk, with yolk of egg spread on their surface, were constantly applied. The fever and pain now ceased; the effect of the application was to produce a suppurative inflammation all round the edges of the scirrhus lump of about three-

quarters of an inch in breadth, which took place not only on the surface, but gradually extended itself downwards to the very root of the scirrhus, far beyond the extent of the plasters, so that the scirrhus gradually rose in height above the sound part of the breast, and was thrown out and expelled, while at the same time its own substance appeared totally untouched by the caustic.

These are very curious facts. They shew clearly that a scirrhus is a dead part, incapable of having its vessels acted upon by the means which excite a healing effort in the arteries of the parts around. See my letter, on the subject of Mrs. C., March 3, 1809.

March 12. On this day, examined Mrs. I.'s breast again; the lump was entirely separated on the under part, and was capable of being turned up, when it appeared to adhere on the upper part only by a few fibres, the wound beneath being much reduced in circumference, almost flat, and containing healthy granulations. Dry lint was applied on the surface of these granulations, and a poultice over the whole.

When the whole came out, which it did some days afterwards, the whole under side was full of a great number of fibrillæ or strings, some of which were two inches in length, and branched out into two or more smaller fibres. What was the structure of these fibres, whether portions of cellular membrane, or vessels with their cavities destroyed, I could not discover.

Treatment of Cancerous Breast in the case of Mrs. C.—My opinions on the subject of cancerous affections are probably of a singular kind, and too

crude to announce at present. So far, however, I may state, that I think a part so affected is absolutely dead; and that the loss of it would be easily affected by the common powers of the constitution, did not the same disposition extend itself to the adjacent parts. The first point, therefore, seems to be to prevent the morbid state from affecting the parts surrounding. Now as this state appears to be an inflammation *sui generis*, I would apply every possible method of removing it; first, by the employment of leeches, not to the lumps, but around it; secondly, by the constant application of cold substances, which during the day may be best used in the form of poultices, very often changed; and thirdly, by gentle evacuations and antiphlogistic remedies to the constitution at large.

When I saw Mrs. C. at Bath, her stomach was so prone to acidity, that meat necessarily formed a large part of her food. This is a very unfortunate circumstance, as it appears to me that the total abstraction of spirits and fermented liquors, and of the stimulus of animal food, might go a considerable way in promoting the antiphlogistic plan. I could, however, much wish an attempt to be made in this way; and in order to avoid acidity, recommend that from a scruple to half a drachm of the Supercarbonate of Kali may be given thrice a day, with a pill of a grain or more of the dried Squill. The bowels may also be kept open with a little Natron Tartarizatum every morning.

Remedies in Cancerous Breasts given in the case of Mrs. R.

April	17.	{	Con. gr. xviii. Aconit. gr. iij, in pil. 6, j, mer. et h. s.
—	21.	{	Con. gr. xxiv. Acon. ivss. gr. in xii, ij bis die.
—	29 to		May 20, with different doses usually increasing.
May	20.	{	Con. gr. xxxvj. Acon. gr. xii. in xii. j ter die.
—	27.	{	Con. ʒij. Acon. gr. xvi in xii, j ter die.
June	3.	{	Con. gr. xliv. Acon. gr. xviii, in xxiv. ii ter die. Mist. efferv. ʒvj c. Scill. recent. gr. xxiv. ʒj ter die cum Suc. Lim.
—	10.	{	Con. ʒijss. Acon. ʒj in xii, duas ter die; ad. Scillæ rec. gr. ij.
—	19.	{	Con. gr. lvj. Acon. xxvi, in xvi. ij 4 ^{ter} die. Scill. u. a.
—	28.	{	Con. ʒj. Acon. ʒss. in xviii. 3 ter die. Scill. u. a.
July	8.	{	Con. gr. lxiv. Acon. gr. xxxii in xviii. 3 ter die. Scill. u. a.

Continued till after 1st October, without sickness or vertigo, when gradually diminished.

Directions in Scirrhus Breast.—Having fully considered the symptoms of Mrs. M.'s case, it appears to me that the state in which her breast would most beneficially to herself remain, would probably be that of a permanently indolent tumour. With

this view we would wish to abstract both in medicine, whether general or local, and in regimen, every thing which could tend to produce such expulsoy efforts as could not finally relieve the part, and would ultimately exhaust the constitution. Under this impression, we are of opinion that all warm fomentations, however soothing to the patient's feelings, must be finally injurious. We, therefore, recommend their disuse, notwithstanding some present tendency towards partial suppuration; and instead of them, would advise that the parts should be continually kept wet with folded linen dipped in the cool lotion which is prescribed. With similar views I recommend that one of the pills in the annexed prescription should be taken twice a day for two days, then thrice a day for the same period, then four times after a similar interval; and that the dose shall be thus increased by adding one pill every two days, as far as may be, without affecting the stomach or the head. In a case of this nature which we are now attending, the patient has reached sixteen grains of the Extr. of Aconite, and sixty-four of that of Conium daily, without the least inconvenience.

With this medicine, at present, we recommend the prescribed draughts, of which one is to be taken three times a day. We wish, however, to observe, that as these draughts contain a certain quantity of T. of Opium, we hope that that medicine may be gradually decreased, in proportion as the pills produce their accustomed sedative effects on the part, and on the constitution.

It is evident that these medicines if they agree, must be continued for a great length of time. If suppuration should come on, appropriate topical remedies should doubtless be applied, but their nature must depend on the existing state of the part. The pills often keep the bowels gently open; but if costiveness should occur, the Magnesia or a little Extr. Col. C. or some Sulph. of Magn. may be occasionally given. The body and limbs should be kept moderately warm. All exertion should be shunned, and stimulating food and fermenting liquors should be avoided. [Jan. 9, 1811.]

Blood Swelling of Breast.—Mrs. C., aged about sixty, of a full habit, and much accustomed to those affections which are called nervous, consulted me some time in the year 1808, for a small livid spot in the upper part of her right breast, which had been preceded by a smarting or cutting pain. In vain I advised her to have recourse to surgical assistance. Some spirituous application was therefore ordered, and I soon heard no more of the complaint.

In the summer of the year 1810, accidentally meeting me in the street, she told me that she began to be uneasy respecting her breast, and therefore desired that I would again examine it. I found the whole breast enlarged to at least nine inches in diameter, hard, scarcely moveable on the ribs, livid, with but little pain on pressure. Mr. Grant was by my desire consulted. He found all the vessels from the axilla much dilated, and a small spot of extravasated blood at a little distance above the nipple. He immediately

judged the disorder to be either hæmatocele, or fungus hæmatodes, though at that period it was difficult to determine which. It was evident, however, from the great extent, and other circumstances of the part, that the whole which could then be done, was to let it alone, and to keep it free from injury.

Several weeks now elapsed, the part remaining in nearly the same state, and the patient altogether free from fever, and able freely to take food and exercise. At length, however, in consequence, as it was said, of an accidental blow on the breast, it began to discharge blood; and this flow continued to recur in different quantities, and of different consistencies, for eight weeks. The spot from which it took place was that where there had been the appearance of extravasation, and where there was a rent or ulceration of the skin, which by degrees enlarged, and at last exhibited a plexus of blood-vessels projecting more than an inch, and full three inches in its greatest diameter. The patient still continued free from fever, and all other parts of the breast became smaller, softer, and approaching to the natural colour and feel.

At the end of about eight weeks, the protruding part began to change its colour, and put on a sloughy appearance; and this was accompanied by inappetency, increased quickness of pulse, great heat, a parched tongue, and other symptoms of fever. These were for several days gradually augmented, till the pulse reached nearly 130 in a minute, and the patient became delirious, and almost unconscious of her situation, so that we had little expectation that she

would continue to live many hours. In the mean while the slough was continuing to melt down, emitting a stench which made it scarcely possible to bear the room. After eight or nine days from the commencement of the fever, the separation being completely effected, the pulse abated to 90 in a minute, and in two or three days more to 64; the tongue became clean, the appetite returned, and all constitutional symptoms, except that of weakness, entirely ceased. As the slough dissolved, the surrounding skin gradually contracted itself, so that when it had completely disappeared, the cavity which remained was scarcely perceptible.

ABDOMINAL AFFECTIONS.

AFFECTIONS OF THE STOMACH.

Actions produced in the Alimentary Canal by Pressure on the Carotids, in reference to Dyspepsia.—

It is highly probable that the effects produced on the alimentary canal by pressure on the carotids are simply those of determination of blood to the intestinal branches of the aorta descendens, increasing the impetus of blood in them, and so increasing the peristaltic motion.

This conclusion meets with confirmation from the effects of brandy, spices, ammonia, æther, hot water, and other evident stimulants, which often produce exactly the same effect as carotid compression, though they often fail of doing so, and then, as there is nothing to hinder their general stimulating effect on the rest of the sanguiferous system, they often increase the flushing and disorder of the head, by increasing the determination to the carotids.

What is the rationale here? The case is complicated; consisting of the muscular substance of the alimentary canal, and the vessels with which they are furnished.

Carotid compression acts on the muscular fibres through the medium of the vessels ; brandy, &c. may act both directly on the muscular fibres, and on the vessels too. The immediate effect may be supposed to be on the former ; and in this way, by exciting the peristaltic motion, it may propel flatus, and thus take off determination to the head, by a complicated process. It may also at the same time stimulate the blood vessels of the part, and thus not only contribute to increase the peristaltic motion, but by making the vessels of the alimentary canal contract, may diminish their undue fulness, and thus determine, by a new balance, blood to other parts. This, with their stimulant, or rather sedative, effect on other parts of the sanguiferous system, seems to explain the effect of Bath Water in curing dyspepsia, and producing gout of the extremities ; though sometimes affections of the head, apoplexy, epilepsy, &c. It acts as a stimulus more especially on the heart, and also on the general arterial system, of which some parts, as in the joints, then become indirectly debilitated, and hence suffer dilatation and inflammation, &c. which constitute gout.

On the whole, I think it probable that the dyspeptic predisposition consists in some undue fulness of the intestinal vessels, which subjects the muscular fibres of the intestinal tube, and more especially, in general, the colon, to be more readily acted upon than is just ; and thus admits of undue sensations and irregular motions, which are sometimes too great, causing uneasy feelings and contraction of the tube ; and at other times, by indirect debility of the tube, too little, and therefore

admitting of preternatural distention, torpor, and insensibility. These states are excited by various causes, of which some act on the muscular and other parts, through the medium probably of the nerves on the blood-vessels, or immediately on the fibres themselves, as, *mutatis mutandis*, affections of the mind, cold applied to the feet, &c. &c. ; and others act more immediately on the fibres themselves, as bile and various ingesta, all either by their quality or quantity, stimulating gently, or excessively, or diminishing action as sedatives ; and thus producing either proper action or motion, or inordinate action or undue contraction, overcoming peristaltic motion, or relaxation, and want of action or peristaltic motion, and often consequent distention ; as in Dr. C. Mrs. H. &c.

Now all these are cases either of undue stimulation, indirect debility, or accumulation of blood by sedatives, which afterwards becomes a cause of undue stimulation. The relief (but probably not cure), therefore, according to circumstances, may be produced by stimulants or sedatives ; the cure chiefly by the latter, or by evacuants, exercise, &c. which, by removing the stimulus of morbid fulness, prevent the effects of sanguineous accumulation in the vessels, and therefore languor, distention, and subsequent action which is often inflammatory.

It may be inquired, whether dyspepsia, bilious attacks, and bowel fevers, are not sometimes even exanthemata, or tending that way, in the villous coat, produced, where there is predisposition, by fulness, by the irritation of acrid food, concurring more especially

with the application of cold to the skin, or any febrile impetus affecting more especially the over filled, or, as it is generally stiled, *weak* part. In proof of this, heartburn is often not to be immediately removed by neutralizing acid, or even by vomiting, or if it is, the parts are so tender, that almost any thing, though not acrid, taken into the stomach will produce a sensation of scratching, &c. So in the colon, previously to some diarrhæas, thrush, dysentery.

Difference between Dyspepsia and Nervous Irritability of Stomach.—It seems to me a great mistake to confound affections of the stomach existing in nervous disorders, with those which are properly termed dyspepsia. It is true, that in the former an uneasiness in the stomach sometimes occurs after food, and not unfrequently vomiting in different degrees takes place. There is, also, in many cases a considerable loss of appetite.

In many points, however, there is a great and important difference. In nervous affections, there seems to be little or no distinction between the effects of different kinds of food ; or if this should happen to exist, it is certain that the stomach is less offended with slops and vegetable substances, than with solids, and especially with animal food ; and at all times suffers most from the quantity, rather than the quality, of the aliment. On the other hand, in true dyspepsia, the quality of the food produces a most essential difference in effect ; fruits, vegetables, and all acescents, occasioning certain uneasiness, while even a considerable meal of animal food is easily and well

digested. Add to this, that dyspepsia is often accompanied with heartburn and other symptoms of acidity, which do not occur in nervous affections of the stomach, and which admit of alleviation from absorbents and purgatives, while such remedies afford no relief whatever in spasmodic affections.

From a view of all the circumstances, it appears to me highly probable that dyspepsia consists in such a state of the villous coat of the stomach or intestines, or both, as subjects them to be morbidly susceptible of irritation from certain kinds of food, or certain changes of the food, which are not perceived, or produce no uneasiness in healthy stomachs; and that this affection of the villous coat, throughout all its degrees up to inflammation itself, is apt to be followed by sympathetic or symptomatic affections of the secretory arteries or glands seated in it, and often of the muscular coat of the alimentary canal itself.

On the other hand, in the spasmodic affection of the stomach, the villous coat is usually free from disease, and the malady seems to be originally seated in the muscular coat, either merely locally, or as a part of a nervous system in general, endued with a morbid degree of irritability. Hence in hysteria a prominent symptom is an inverted convulsive motion of the alimentary canal from the colon to the fauces, during which inversion flatus, which certainly exists in all such canals in health, and which should pass insensibly downwards, inviscating itself with the food, is arrested in its course, produces borborygmi, and is

often thrown up with violent eructations, from which the patient feels some temporary relief.

Proof that Dyspepsia depends on Irritability or undue sensibility, especially of the Colon.—There is often considerable variation in the degree of inconvenience resulting from the use of foods or drinks which disagree. Sometimes, if I take acids, as considerable quantities of fruit, and immediately afterwards eight or ten scruples of Kali at a dose, in saturated Aqua Kali Carb., I feel no distention of the stomach, and bring up no carbonic acid gas; several hours afterwards there is great uneasiness in the colon, which is not relieved till a great quantity of wind passes downwards. In this case it was absolutely necessary that the wind should have existed in the stomach, because an acid and an aërated alkali were mixed there. But no dyspepsia, or what is called wind, was produced by it, because the stomach itself was not thrown into a spasmodic state from being over irritable. Afterwards, however, when the same wind passed into the colon, that bowel being in a state of morbid irritability, the uneasiness from the wind was produced there till the wind was expelled.

That the *acid* in *dyspepsia* is produced, or rather increased, by excessive retention of the food in the stomach, is probable from the case of scirrhus pylorus, in which food with difficulty passes, though it seems to be dissolved with tolerable facility; for opening medicines most difficultly act, and vast quantities of food in a dissolved state are thrown up in this complaint, with the strongest possible smell of

vinegar, or rather of half vinous, half acetous liquor, like cider that has long stood in an open vessel. And the process of fermentation is actually going on; for a substance like yeast on the head of a syllabub often continues rising to the top of the fluid. In this last state I never saw a patient recover.

Is the *wind eructed*, and even passed *downwards*, in *dyspepsia*, after eating things which disagree, and when the stomach is in a peculiarly acid state, *Sulphuretted Hydrogen gas*? Will it precipitate lead from its solutions? How does it come there? Is there sulphur in animal substances, or in an apple, a peach, a gooseberry, bread and butter, coffee or tea with sugar and cream, &c. &c., all of which often produce it in myself? If not, sulphur cannot be a simple substance, but is a compound, of which the parts exist in the human stomach, or in their ingesta. It is capable of being removed by what neutralizes acid. Is it sulphurous acid?

Stomach not the Seat of Nervous Affections.—This is inferred, because certain causes applied to the stomach aggravate, produce, or relieve them. For the same reason we might say that the feet or skin were the root of disease in a headach, or in a pleurisy, because those diseases have often been produced by cold applied to those parts. On the same reasoning, curing a rheumatism by a blister would argue that disease to exist in the skin; and an ague by Bark, that the disease existed in the stomach. So all other diseases cured by remedies taken internally. Persons labouring under nervous disorders are, in fact, unusually

exempt from dyspepsia. They can, generally speaking, take all kinds of food indiscriminately; and when food appears to disagree, it is more by its quantity, or general stimulus, than by any specific quality in any peculiar kind.

Nature of Heartburn.—This symptom is produced in Mrs. B. by what agitates the mind. It is also relieved by Lemon juice. All this is an evidence of its depending on a certain state of the stomach itself, and not merely on its contents.

Dyspepsia.—A gentleman, aged upwards of thirty, of a full habit, was liable from fatigue, late hours, anxiety, or grief, or acescent and flatulent diet, to complaints, such as I am about to describe from an actual attack of the disorder, under which I attended him.

Just before he went to bed, some events occurred which filled his mind with deep anxiety. He immediately felt a numbness, or, as he expressed it, “a want of life,” in his stomach or alimentary canal, accompanied with some degree of sickness. On lying down in bed, his pulse became small and quick, with cold sweats about the extremities, and a frequent sense of pricking in his hands and face. He had, also, a kind of bursting tightness in his head, though unaccompanied with any flushing of the cheeks. He continued in this state for several hours, tossing in his bed from side to side, endeavouring in vain to obtain a few minutes sleep, alarmed at every sound, and when for an instant he forgot himself, starting up with frightful dreams and imaginary noises. At

length, about five o'clock in the morning, a warmth came on in his stomach, some wind was discharged from his mouth, and more either passed over the pylorus, or shifted its situation in the arch of the colon; the feet became warm; the uneasy bursting in his head, and the pricking of his face and hands, vanished, and calm sleep soon ensued. He awoke free from complaint.

Determination to Head, &c. from Stomach or Colon.—When Miss V. came to Bath, September 26, 1788, she was pale, and almost livid, constantly cold, particularly in the feet, subject to palpitations of the heart, and loss of breath, on the least motion; affected with swellings of the legs, loss of appetite, almost daily vomiting, and a perpetually violent head-ach, greatly aggravated towards the evening, and attended with extremely restless nights. Her pulse was quick and full, and her bowels generally constipated. Little attention had been paid to her regimen, which chiefly consisted of slops. She had taken, by Dr. Warren's advice, Myrrh, Salts of Wormwood, and Steel Medicines; and under another medical practitioner, Sp. Ammon. foetid. in Aq. Pulegii, and draughts of Inf. of Red Bark (with a little Orange Peel) ζ iss. Pulv. Calumbæ gr. xv. P. Arom. gr. iv., without any benefit.

I directed that her diet should consist principally of animal food, that she should avoid all acid and acescent food, all sweet things, tea, coffee, and chocolate; all fermented liquors, as beer, porter, and wine.

From the second day that she began this regimen,

to which she closely adhered, her sickness left her, and returned no more.

I ordered her a few medicines, principally of the cooling kind, and the external and internal use of the Bath Waters. She was cured of her headach, recovered her strength, sleep, and the warmth of her limbs. After this amendment, all obstructions ceased, and notwithstanding a violent cold, attended with fever, which attacked her within the last fortnight of her stay here, she left Bath entirely free from complaint the 2d of November.

Spasmodic Stomach Disease, not Dyspepsia.—Sept. 9, 1811. Mr. L., aged thirty-seven, of the middle size and active, in the former part of his life was much confined by business in London, in a very small close shop, and became much and dangerously indisposed with cough, which was supposed to threaten consumption. He left London, and grew better; and returning to it again, was affected with the same complaint. He then went into the country; and pursuing his business of a linen-draper, has been ever since almost totally confined to his shop.

About ten years ago, his appetite being very good, in about half an hour or more after eating, as soon as he began to move about, a part of what he eat came up in mouthfuls, undigested, and sour, without sickness, and always with a kind of stupidity in his head, taking away much of his recollection, and accompanied with slight giddiness, but no pain. It often came on without exercise, and continued more or less for an hour or longer. What is remarkable,

though walking a little, or using any other gentle exercise, did not remove it, yet walking briskly six or seven miles, or more, especially using hard exercise of the upper part of his body, as in thrashing corn, or cleaving blocks with a large hammer, he then escaped the malady. He, also, generally found that when he took Camomile tea for breakfast, or with his dinner instead of beer, he was free from the disease. But then after some months his head became worse, so that he left off the Camomile tea, and on the very first day of so doing, the rejection of the food became as bad as ever. These complaints still exist. He does not find any material difference as to the quality of his food, except that tea, coffee, and cocoa, make him costive, and impede his rest at night. He therefore abstains from them, as he does also from malt liquor; but drinks about four glasses of wine daily; and sometimes weak brandy and water. His appetite is, by his own confession, voracious; and his bowels are rather costive. He continues at all times to have some shortness of memory, and I observe in him a sort of hurry and irritation, which argue some deviation from the natural state of the brain. He sleeps in general well, and his water is variable, being sometimes pale. He sometimes feels great depression of spirits, which violent exercise relieves, as it does the rejection of his food. For two years past he has had motes floating before his eyes.

He has tried tonics, and remedies of a stimulating kind, without relief; but received benefit from being cupped ten days ago, since which he has scarcely

thrown up his aliments. Pulse 52, strong, and hard ; in the carotids enormously so. Tongue clean. Mitt' Sanguis è Brachio ad 3xii. The blood was of an uncommonly dark colour, but in no other respect deviating from the healthy state.

On the 12th of September, the following directions were given him :

I am fully persuaded that your disease is very much in your own power, and that by proper regimen and remedies you may, at least, very much alleviate it.

You will have observed that you have already found means of putting a stop to the rejection of your food, but that, almost as soon as you have diminished the malady by means applied to the stomach itself, the constitution has immediately suffered. On the other hand cupping has diminished the disease, and at the same time relieved the constitution. These facts point out, not only the nature of the malady, but the proper means of relieving it. In the first place, I would advise you to abstain from tea, and all those articles of diet which you have found to disagree with you ; together with spirits, all fermented liquors, spices, vinegar, pork, salt or fat meats, eel, salmon, and shell-fish, carrots, new bread, and much butter. Secondly, meat should be eaten only once a day ; and all your meals should be well chewed, slowly swallowed, and eaten in much less quantity than your appetite demands.

You will observe that a minute attention to these last points is absolutely indispensable, and at least as necessary as a proper choice respecting the quality of your food. Thirdly, exercise should be every day

taken, both of your legs and whole body, in as great a degree as your strength will permit. Fourthly, you should take the pills in the annexed prescription regularly for a month, adding any opening medicine, should your bowels not be sufficiently open; and fifthly, you should go to bed and rise early; and in the winter avoid hot rooms, and keep your body and limbs warm by suitable clothing. Sixthly, at the end of a fortnight, you should have eight ounces of blood taken from the arm.

Oct. 12. His bowels have been open from twice to four times daily; and when the latter has taken place, he has always taken only two of the pills. He was blooded according to my direction, and on the 3d, 4th, and 5th of October, had some of the usual spitting up of food, in a sour state; but on those three days only, since I before saw him. He has followed with tolerable precision the directions. His head has been somewhat better; he has slept well; but complains of considerable weakness, in consequence of which he has used no hard exercise of any kind. Spirits good. Tongue clean. Pulse 56, and more soft; and that of the carotid much less full than it was, but bounding. I find on farther enquiry that the weakness seems to depend on considerable pains about the muscles of his limbs, back, and neck.—
Mitt' Sanguis è Brachio ad ℥vj.

℞ Scillæ exsiccatae ℥iss.

Extracti Aloës spicatae ℥ij.

Confectionis Rosæ Caninæ q. s. sit. Ft. Pilulæ

lx æquales. Sumat unam ter die.

Dec. 2, 1811. Had leeches on the 14th, and 21st. Bowels open twice a day. Head and memory better; as is also the stomach. So that he has not brought up his food since I last saw him, and for this last fortnight has had scarcely any disposition to do so. Has taken much exercise. Sleeps soundly. Pulse 60. In the radial very soft, and rather weak; in the carotids still very strong, full, and bounding. Tongue clean. Motes less in his eyes.—Hirudines semel in 7nâ ad tertiam vicem.

Excessive Vomiting cured by gently exciting Peristaltic Motion.—Mrs. T., a married lady, small and delicate, who had never borne children, was about forty years old, when she was seized with the measles. Nothing particular occurred during their course; but after they had ceased, she began to be affected with vomiting, which always occurred after taking food, and at last increased to such a degree, that a single teaspoonful of water appeared to be rejected in a few minutes after it was swallowed. That which was vomited was altogether unmixed with any thing which had a morbid appearance; and there was no fever, or any one symptom by which I could ascertain the existence of any local disease, except this unusual irritability of the stomach. The bowels were occasionally opened, and every remedy which could be suggested by myself or others tried, without relief. Emaciation went on in the most rapid manner for some weeks, and at last to such an extent, that it was, literally, as easy to demonstrate the metacarpal bones in this patient, as on a skeleton.

It now occurred to me, that it might be possible to counteract this inversion of the peristaltic motion of the intestinal canal, by some remedy which should excite the natural action, and which the stomach should be scarcely able to reject. Accordingly, about half a grain of Socotorine Aloës was given every four hours, moistened only with a few drops of liquid. This remedy succeeded. The small doses of Aloës were retained, and operated uniformly as a gentle purgative, and in less than two days all disposition to vomiting ceased.

Vomiting without Local Disease of the Stomach, an Evidence of Disorder of the Brain.—When vomiting occurs more or less every day, especially in children, without any mark of what is commonly called indigestion, or local disease of the stomach, alimentary canal, or liver, &c., one may reasonably apprehend it to arise from disorder of the brain. And this will be especially the case, if there is any other mark of disease of the head, as headach.

In *scirrhus stomachs*, the vomiting takes place equally, when there is nothing black ejected, or nothing bilious. The former shews the advanced state or degree of the disease; the latter merely the intensity of sickness, and therefore occurs on a thousand other occasions where that happens, as from a blow on the head, going to sea, &c.

Affection of the Stomach, &c.—Mr. G., aged about sixty, had a total loss of appetite, with more or less of vomiting after every sort of food. During my attendance on him for several weeks, he was free

from fever, his skin being always cool, and his pulse not exceeding 60 in a minute. After gradual and excessive emaciation, he died.

He was opened by Mr. Norman, sen. In the abdomen there appeared to have been at some former period considerable inflammation, as was indicated by the various adhesions of the peritonæum, chiefly where it covered the spleen, bladder, and rectum. The mesenteric glands were in general scirrhus, appearing in great numbers, about the size of small peas, very hard, but not inflamed. The substance of the intestines was in a healthy state. The stomach was so contracted as not to be capable of containing more than half a pint. It was very pulpy, particularly towards the pylorus, where it was nearly putrid. The liver was perfectly sound. The kidneys somewhat larger than natural.

Water Brash often begins, which I have fifty times experienced, in an instant by a kind of jump, a little above the navel; with a painful sort of tightness or stricture, and an approach towards sickness, exactly similar to the feeling which begins the operation of an emetic, and the same kind of chilliness and shuddering, and involuntary rotation of the head backwards and forwards. At the same time a great quantity of saliva rushes into the mouth, perfectly tasteless, and most clearly a mere secretion from the salivary glands. Sometimes the feeling begins higher up in the stomach; with a sensation of pressure against the pylorus. The uneasy feelings occasionally amount almost to faintness; but I have never been either

absolutely sick to vomit, nor had any burning heat in my stomach or throat, nor rising of acid mixing with the saliva. These symptoms are therefore not essential, but merely coincident; just as dyspnœa may be with the syncope angens, or sickness with hemi-crania. The complaint usually goes off with breaking up of wind; and is relieved by swallowing stimulants; but by nothing more effectually than by swallowing the saliva itself, which in a few minutes removes the uneasy sensation, and seems to be a provision of nature for substituting the natural peristaltic motion, in the place of the inverted or spasmodic motion which serves to produce or constitute the chief symptom. The sympathy in this case between the alimentary canal, (stomach), and salivary glands, and muscles of the neck, is curious, and deserves inquiry.

The term *Pyrosis* is certainly very improperly applied to this disease, because it implies a sensation of burning in the stomach or œsophagus, which is usually called cardialgia, and which is often, I might say generally, wanting in this malady. Although, therefore, both may exist together, the cardialgia is far from being essential to the character of the disease, which, when in its simple and uncomplicated form, is precisely such as I have above described, and as I have myself more than fifty times experienced it.

The same may be said with regard to the liquid which flows so copiously into the mouth, and which in the simple type of the disease is perfectly tasteless, and certainly mere saliva; though it may happen, when the disorder is violent, that the spasmodic

affection of the alimentary canal may cause some of the fluid or other contents of the stomach to be thrown up, in which case the saliva will doubtless be mingled with what is acid or bitter, or has other sensible qualities of those contents.

In me, for many months, it has inevitably occurred after drinking coffee, or tea, however weak, generally two or three hours afterwards. It sometimes comes on in walking, rarely wakes me in the night, and still more rarely occurs the following morning. Using muscular motion in the act of stooping is peculiarly apt to produce it in the evening after tea or coffee. Once when the seat of the uneasy feeling appeared to be in the colon, pressure on that part produced uneasiness there and aggravation. Yet thorough relief was not obtained till a sudden burst of wind. The attack has been brought on by violent sneezing from cold; which of course drove the diaphragm against the liver and stomach.

Water Brash.—Mrs. P., aged between fifty and sixty, formerly subject to dyspepsia, accompanied with headach, and long living in India, has for some time past been occasionally waked in the night by a feeling of coldness and sudden pain below the scrobiculus cordis, which obliges her to rise in bed, with apprehension of suffocation. These attacks are accompanied with a slight nausea. Immediately her mouth runs over with clear saliva; but, notwithstanding the slight nausea which accompanies the complaint, there is no vomiting. It goes off in about half a minute, with some evacuation of wind upwards. It has occurred

after eating pork, fruit puffs, &c. &c. for dinner, soon after which she has felt uneasiness, and other symptoms of indigestion in her stomach.

Let her abstain from these things, from beer, and acescents, and strong green tea, of which she is fond, and take meridie et h. s. quotidie Aloës gr. j. P. Aromat. gr. ij.

From the use of these remedies she lost the complaint.

Water Brash.—April 26, 1812. Mrs. H., a thin woman, aged fifty, the mother of ten children, liable to indigestion, and of a costive habit, has been for two years subject to a pain, which suddenly seizes her in the pit of the stomach, going through between her shoulders, continuing only for a few minutes, and soon succeeded by a copious discharge of saliva from the mouth. These attacks are often followed by sickness, which is usually attended with vomiting of bitter stuff and mucus. This complaint has of late been greatly aggravated; and her stomach, which, as she says, during the attack is often drawn up into knots perceivable externally, is afterwards very tender to the touch. Appetite good, except during or near the fits, one of which has now lasted with little intermission for forty-eight hours. She is subject to great flatulency, and is for a while relieved by bringing it up, or by the sickness. She has had a costive motion to-day. Pulse 80, and rather hard. Tongue slightly white. Urine sometimes pale, at others high-coloured. She had never any hysterical affections. Tongue slightly white. She has

been blooded, and for a long while taken medicines without benefit; but has never had any directions respecting regimen.

℞ Hydrargyri submuriatis gr. iv.

Confect. q. s. sit. Ft. Pilula h. s. sumenda.

℞ Infusi Sennæ ʒix.

T. Sennæ ʒiij. Ft. Haustus, cras primo mane sumendus.

April 27. The medicine produced four loose motions, and her pain is considerably better, though immediately after breakfast she had a slight attack of the eructation of saliva with pain, but without sickness. Pulse 72, and hard. Skin hot, and sweaty, (in bed.)

℞ Magnesiae Carbonatis

Cretæ præparatæ āā ʒij.

Pulv. Cinnam. c gr. x. M et divide in chartulas xii æquales. Sumat j primo mane, meridie, et horâ somni, quotidie, e Thea Zingiberis.

Let her abstain from tea, fruit, acids, broths, wine, beer, and pastry; drink rosemary tea, and eat meat for breakfast.

April 30. She has had no motion these three days, notwithstanding which, she has scarcely had any return of her complaint, and her appetite is somewhat better. Pulse 96, full and strong. Skin rather hot and perspiring, though she is up.—Pergat in usu Pulverum.

℞ Extracti Aloës spicatæ.

———— Gentianæ āā ʒss. M et divide in pilulas xx æquales. Sumat unam primo mane et horâ somni quotidie.

May 6. She has continued the medicine regularly, and has had one motion daily. Pulse 72, and full. She has had no return of complaint, and her appetite is perfectly good. Let her keep her bowels open, and adhere to the diet already recommended.

In the course of a few months I attended this patient in two subsequent attacks of an exactly similar kind ; in which I found her stools to be as black as pitch, evidently from blood ; and was then informed that the same appearance had taken place in all her preceding attacks. In the last fit, in the month of November 1812, after purging had been long ineffectually tried, the patient was immediately relieved by a copious blood-letting from the arm. The blood exhibited no appearance of lymphatic crust.

There was in this case no pain on pressure, swelling, or any other symptom indicating hepatic disease ; or any vomiting of blood.

Black Vomiting in local Disease of Stomach organic.—Oct. 3, 1808. Mr. R. C., aged forty-six, lived very freely in the former part of life. For near a year symptoms of this complaint begun ; inappetency, and, for three months, vomiting after taking food. Pain now about the chest ; frequent eructations, occasionally very inodorous, obstinate costiveness at all times. No stool for nine or ten days. Pulse about 70, and soft. No fever. Complains of constant thirst. Eructations produce pain in the stomach and chest ; and he has frequent sense of heartburn. Vomits frequently, and suddenly, without much previous sickness or straining ; and what he brings up is

to-day like coffee without grounds mixed with gruel, of which the thicker part, or meal, has subsided, and is capable of being shaken up, in a ragged appearance, and of dark brown colour, among the thinner supernatant liquor. A very restless night. Has had glysters of Aloës, and taken various pills of Elaterium, Aloës, and Calomel, without effect. Infund' Enema ex Aquæ ʒij. Olei Olivæ ʒj. Salis Marin. ʒij. by means of a double injecting syringe. A sense of weight about the chest.

Oct. 8. He has had no stool this day. His pulse 100, and weak.

Oct. 9. His head much affected; with a good deal of forgetfulness, more like delirium than mania. Pulsation of the aorta in the hypogastrium very strong. Pulse 90, and weak. An Enema produced some fæculent evacuation. Urine high coloured yesterday, paler to-day. Complained last night of much burning in his stomach, after which he vomited about a pint and a half, with some brownish sediment. An effervescing draught, with three drops of T. Opii, seemed to affect his head.

Oct. 10. Pulse 100. No stool. Vomiting constantly of what he takes. What he has thrown up smells like fæces, though it is fluid with very little of a brownish tinge. Wanders at times. Breath offensive like vomiting. Urges continually. Tongue clean, and free from fur. Has taken no food for many hours; but is always asking for liquids, which he sometimes swallows, and at others not.

Oct. 15. Pulse 96, and very weak. Extremely

incoherent, though calm. More or less of hiccup, never very violent, for some days past. Motions yesterday continued to come away after the glyster, that is, fluid tinged with fæces, involuntary at times, till six in the evening. Night before last vomited a larger quantity than usual like thin cocoa, mixed with a very little milk, and a thicker substance of the same colour, but of the consistence of thick gruel, lying at bottom. No fætid smell in it. Yesterday, at half past five, vomited at once a quart of still darker coloured clearer liquor, with darker matter at bottom, between the colour of Scots snuff and soot, like a powder mixed with slime. To-day somewhat of the same vomiting. Has taken no solid, or any thing which could produce this colour or substance. Urine in natural quantity, and rather pale. Tongue extremely dry and parched, and he is continually calling for cold things, of which, however, he does not drink much, but spits it out again. Has taken about three quarters of an ounce of Syr. Pap. with Infus. Rosæ, and had a quiet night. Constant fits of pain about the middle of the sternum, which admits of some alleviation from rubbing, and for four or five days from pressing violently on the chest.

Oct. 19. Pulse 90, sometimes weak, sometimes full. Ever since last night has had solid stools of a brown, but not black, colour. Vomited yesterday as at last report. No food, but Soda Water, for three days. Eructations to-day like putrid flesh. At times wandering.

Oct. 21. Continued to have stools till ten last

night; those in the afternoon black. No vomiting. Pulsation of the aorta on the right, down as far as the navel, very strong. Pulse 108, and weak. Respiration irregular and catching. Eructations very putrid.

Oct. 23. Died about ten this morning, having constantly purged and vomited small quantities of black matter.

A dissection not permitted.

Probable Ulceration of Stomach, but not much Thickening of the Pylorus.—Col. R., aged between fifty and sixty, long engaged in active military service in Egypt and other countries bordering on the Mediterranean Sea, accustomed to drink every day from a pint to a bottle of wine, and who had been subject to flatulency and indigestion from certain kinds of food, as, among the rest, milk and chocolate, which always produced headach, began about the month of July 1812, to be often affected, while riding on horseback, with a sort of cramp across the region of the stomach, which was relieved by eructations, and ceased on his discontinuing his ride. In this state his health remained for two months, without any loss of appetite; when he was on a sudden seized with a vomiting of fluid resembling coffee grounds, which came up into his mouth without sickness, or much effort, and in small quantities, frequently repeated for seventy hours.

From this period he has constantly suffered more or less of pain or weight across the pit of the stomach, aggravated by taking food, especially of the solid kind; and he has continued frequently to spit up his

food, but has twice only since the first vomiting had a repetition of the same symptom, once about six weeks ago, and once about a fortnight ago, on each of which occasions he discharged a black coloured fluid, of the appearance before described. When he has spit up his food, it has been by a kind of eructation or hiccup without sickness, and he has always felt his stomach more or less relieved by the evacuation.

His appetite for solid food had not entirely left him till after his arrival at Bath six or seven weeks ago; ever since which time he has drunk the Waters, which have seemed to sit well on his stomach, and have been very agreeable to his feelings. His bowels have constantly acted without assistance from medicine. He has continued to lose flesh and strength; and is much emaciated, and of a sallow complexion. For some weeks past he has only taken fluids, and in about an hour or two afterwards usually feels great uneasiness across the pit of the stomach, which often continues through the greatest part of the night, accompanied with a rumbling noise, and a sense of conflict in order to expel, in some direction, the contents of the stomach. Once or twice during this struggle, the head has been affected with intense pain. At various times during these last two months, the attacks of complaint have been accompanied with violent burning heat of the stomach.

A hard swelling, the inferior edge of which is well defined, may be easily felt, extending all across the epigastrium, to an inch and a half below the ensiform cartilage. When I press on it I produce no sickness,

eructation, or other movement of wind, or pain of the back, but an increase of that weight amounting to pain which the patient constantly feels after taking much food, and which he always refers to that part. He lies equally well on his back and sides, and has no difficulty of breathing. His pulse is usually from 70 to 80 in a minute, and of moderate strength; his skin cool; his tongue pale, tolerably moist, but slightly furred; his urine sometimes rather high coloured, but more usually natural as to quantity and colour.

April 20. These were the circumstances of Col. R.'s case four days ago. Since that time he has vomited twice or thrice; and last night, after violent workings and uneasiness in his stomach, threw up about a quart of fluid, which now appears to be an extremely acid semi-transparent liquid of a pale brown colour, covered with a grey scum, exactly resembling yeast, a full inch in thickness. The next day Col. R. left Bath, on his return to his house in Kent.

It was easy to see that this was a case of scirrhusity, or at least chronic ulceration of the pyloric portion of the stomach; and the opinion which I had formed was verified from the following account of the dissection, communicated to me by Mr. Kelson, of Seven-oaks, Kent.

“On opening the chest, the lungs appeared in a healthy, natural state, excepting an old and considerable adhesion to the pleura on the right side.

“In the abdomen, the liver had in general a good appearance; but in a small part it participated in

“ the disorder of the stomach, to the lower part of
“ which it adhered. A large portion of the stomach
“ was in a scirrhus state, and the pylorus was sur-
“ rounded by an ulcer, of a size larger than a dollar,
“ from whence proceeded the black, fætid discharge.
“ At least a quart of that liquor remained in the
“ stomach. The disease extended scarcely an inch
“ into the bowel.

“ In the gall-bladder there were eight or ten
“ stones. In other respects the body was in a natural
“ state.”

Organic Disease of Stomach.—Mr. C., aged about sixty-five, who had been at various times for many years in hot climates, of which he had occasionally suffered the diseases, though in no very violent degree, twenty-seven years afterwards, while walking in the country during a dark night, struck his stomach a very violent blow against a post. From this accident he seemed to suffer no other inconvenience than the present pain. About three months afterwards, having eaten a rather large dinner and drank freely, he was seized in the night with great disorder in his stomach, the contents of which rose into his mouth, threatening, according to his own account, immediate suffocation. From this time he began to have more or less of uneasiness and flatulency in his stomach, especially after eating ; though, as he said, without diminution of appetite.

In this state I saw him in the month of May 1811, when I ordered him to abstain from acescent and flatulent food, and full meals, and to take once or

twice a day a weak preparation of Aloës, so as to keep his bowels somewhat more open than was customary with him. From this plan he became in a few days so much better, as, according to his own account, to have no remains of complaint.

He then went to Cheltenham ; and afterwards to London, where, on account of a severe relapse of his complaint, he obtained very able medical assistance. His disorder, however, increasing, he came to Bath about the middle of September, already much changed by emaciation, and labouring under the following symptoms. His appetite, by his own account, was good ; but uniformly at a certain period after eating, usually two or more hours, he felt a great degree of uneasiness about the pit of his stomach, extending upwards to his chest, and affecting the opposite part of the back, and the shoulders on each side. This pain was accompanied with a considerable aggravation of flatulency, to which at other periods during the day he was subject ; and the wind which he eructed was always of a highly acid and inodorous smell. There was also occasional heartburn ; but previously to his arrival at Bath, the symptoms had not been more than twice or thrice attended with vomiting. His bowels were not difficultly moved ; and his motions had no peculiar appearance. His night urine was rather high coloured, but clear ; that made in the day perfectly natural. His tongue was clean, but dry ; which might, perhaps, be in some degree attributed to his always sleeping with his mouth open. His pulse was always rather quick, being seldom

under 80 in a minute ; and it was sometimes slightly intermittent and weak, especially during the fits of pain, which occasionally produced considerable faintness. His stomach, when entirely empty of food, was free from uneasiness. When examined externally, it exhibited neither swelling nor hardness, nor was it sore to the touch. His skin was not hotter than natural.

Under these circumstances, I recommended a total abstinence from fermented liquors, slops of every kind, acids, and all acescents ; and desired him, instead of the usual method of frequent eating, to take only two small meals daily, and those chiefly of animal food, with plain or Soda Water for drink.

By way of remedies, I advised one grain of Extract of Aloës spicata, with two of Extract of Conium, to be taken night and morning, according to its effect on the bowels ; four ounces of the Hot Bath water to be drank twice before breakfast, and ten or twelve grains of Chalk, with a little compound powder of Cinnamon, to be taken every day half an hour after breakfast, and before dinner. After two or three days, the pills acting too much on the bowels, were reduced to one daily. About the 23d of September, there was a fit of vomiting, in which a good deal of extremely acid fluid was ejected, emitting the same smell of sulphuretted hydrogen gas as his eructations. Mr. C. was then desired to take a little Calcined Magnesia, whenever the flatulency and acidity were troublesome ; to which, a few days after, was added Tincture of Opium, when the pain was most distressing.

On the 28th of September, there was another attack of vomiting, followed by a large loose stool, neither of which was preserved for my inspection.

September the 30th, the chalk was, in consultation, changed for a solution of Carbonate of Potash, of which about a scruple or half a drachm was ordered for a dose twice a day; and the bowels being freely open, the pills were omitted, and Calcined Magnesia directed to be more largely taken twice or thrice in the twenty-four hours. Mr. C. was also requested to bathe for ten or fifteen minutes, two hours before dinner, in a bath of 93 or 94 degrees.

The bowels being now for two days confined, and the symptoms in other respects continuing as before, a desert spoonful of Castor Oil was given about midday, October the 2d. It operated largely during the night. The motions were watery, and of a greyish brown colour, without mucus, or any considerable quantity of bile.

Four grains of Extr. Colocynth. compos. were ordered to be taken on the night of the 3d of October. Two hours afterwards, he was seized with griping in his bowels, accompanied with the usual pain in his stomach, breast, and back, and had many stools nearly of the appearance last described.

On the 4th, he was very weak, had eaten with less appetite than usual, and began to feel the accustomed pains while I was visiting him, about two hours after his breakfast. His pulse was 84, soft, and regular; his skin cool, and his tongue apparently moist; notwithstanding which he complained of considerable thirst.

He was requested to bathe on the following morning in the Queen's Bath, to take night and morning one of his first pills of Aloës and Conium, to have his abdomen rubbed twice a day with a mixture of Linimentum Saponis and Tincture of Cantharides, and to persevere in his other remedies.

October 7. No material change had taken place. The pills had operated. He had for two or three nights taken sago with a little brandy; and on the morning of the 6th, had some uneasiness in the stomach before breakfast, which was somewhat relieved by eating. Pulse 84, and moderately full.

It was therefore in consultation desired that Mr. C. would always eat a little when the pain began to return. An ounce of Tincture of Opium was added to the Liniment, and a drachm of T. Cardamoms was directed to be taken with his first glass of the Bath Water.

Oct. 9. His bowels have been open twice yesterday, and once to-day, from a pill night and morning. He has eaten two hours after breakfast; and taken a little solid food each night. He was in pain, chiefly about his back and shoulders, the whole of yesterday, with considerable aggravation during the night from twelve till five, when he took about thirteen drops of Laudanum. About nine, during eructation, some liquid of a brownish colour, with indigested meat, and extremely acid, was gulped up. To-day he has been tolerably free from pain. Pulse 84, soft, and regular. Tongue not furred; and he is less thirsty

to-day. The Tincture of Cardamoms very much disordered his stomach.

It was directed that he should continue the pills, substitute Tincture of Orange peel for that of Cardamoms, persevere in his last ordered diet and in the use of the Bath Waters, and occasionally wash his mouth with a mixture of six drops of dilute Sulphuric Acid in a quarter of a pint of cold water.

Oct. 11, nine A. M. Dr. W. and myself were suddenly sent for, when we learned that Mr. C. had gradually swallowed a glass of the Sulphuric Acid with water, between nine and ten o'clock on the evening of the 9th, after which he went to bed, and at twelve was seized with violent pain in the upper part of his bowels, followed by a purging stool, which relieved his pain. In the night he had another stool, which, as well as the former, was loose and brown, and slept on the whole tolerably well. At eleven A. M. he had a motion. He discontinued the use of the Sulphuric Acid, but went on with his last ordered diet, eating, besides his breakfast and dinner, a little meat with biscuit, between those two meals, and sago with brandy at night. Through the whole of the 10th, he was very faint and weak, with scarcely any appetite, and about ten o'clock at night was seized with great pain about his bowels, followed by vomiting to the amount of about a quart. What he vomited was of a brownish colour, like greatly diluted coffee, throwing up to the surface a copious fermenting scum, like the head of a syllabub, only of a brown hue. The pain continuing, he took, at two doses, twenty-

five drops of Laudanum ; and had two glysters of Castor Oil, of which the first glyster produced a small stool ; but all without any relief with regard to his pain, which continued through the night, though in a higher situation than before, extending chiefly across the epigastrium, and up to the muscles on the back of his neck. He had constantly been spitting up with little straining the contents of his stomach, of which some which was recently rejected resembled chocolate fallen to the bottom of a clear, slightly brown liquid. The pain was of a most agonizing kind, accompanied with faintness and cold sweats. His pulse was 132 in a minute, and extremely small and weak, and his respiration 12. A fomentation had been employed without effect.

Twenty-five drops of Laudanum were given in an ounce of Cinnamon water, but soon thrown up by vomiting. It was then directed that a glyster should be given, consisting of four ounces of Decoctum Hordei, and forty drops of Tinctura Opii ; and that twenty-five drops of T. Opii should be repeated at twelve o'clock, if the pain continued.

Eight P. M. He has continued dozing almost constantly from the administration of the glyster to this time, and when roused, answering incoherently, and with little consciousness. There has been no vomiting or stool. Some wind eructed while I am near him, has a stercoraceous smell. Pulse 132, small and weak. Skin bathed all over in a rather cold sweat.

Oct. 12. He continued in the same state of stupor and incapacity of attention till nine this morning,

when the pulse was so weak as scarcely to be felt. But soon afterwards, having taken some warm gruel, his consciousness returned, and he expressed his wonder that "he was still an inhabitant of this world." He was free from pain and vomiting, and had no motion. His tongue was dry, and towards the root very brown; his pulse 120 in a minute, and much more strong than the day before; his skin moderately warm, but still slightly perspiring. He was ordered a glyster of Castor Oil; and small quantities of fluid nourishment from time to time.

At eight in the evening, the glyster had not operated, and in other respects there was little change, except that he shewed somewhat more of strength, and was able to sit upright in bed for a considerable time. He was free from pain, but complained of great soreness about the stomach when it was touched, and on that account was apprehensive of any motion of his body. The anodyne was directed to be repeated, as circumstances might require.

Oct. 13, half-past ten A. M. He had occasionally dozed through the night till between four and five in the morning, when the pain recurring, first in his side, and then in his stomach, he took twenty-five drops of Laudanum with a little Cinnamon water, and soon became more quiet. At our visit he appeared very weak and torpid, not recollecting himself without considerable apparent effort, and when asked, complaining of pain chiefly in the left hypochondrium, where, as well as across the scrobiculus cordis, there was great tenderness to the touch. There had been

no vomiting or stool ; but he had passed more than a quart of rather high coloured urine, without sediment. Tongue very dry, and towards the root brown. He had been very thirsty, drank a good deal of liquid, and often taken fluid nourishment. Pulse 120, soft and equal. Respiration 26, and easy. Skin cool, and rather moist.

R Tincturæ Aloës ʒiij.

Aquæ Cinnamoni ʒss.

— fontanæ ʒiij. M Sumat cochleare amplum
statim et 4^{ta} quâque horâ.

Six P. M. Two doses of the medicine had been taken, but had not operated, though he had occasionally complained of pain in his bowels, promising immediate evacuation. He had not vomited ; had occasionally slept, though with much jactation ; and was evidently weaker than in the morning, being unable to turn in his bed, scarcely answering when spoken to, and then only in a whisper. His mind was, however, apparently clear. Urine proper as to quantity and colour. Pulse 120, and rather bounding. Respiration 36, and therefore short. Skin moist and rather cold. Pupils much contracted,—Pergat in usu Misturæ è Tincturâ Aloës.

Oct. 14. His breath became gradually shorter, and he died at half-past one this morning, without stool, vomiting, or convulsions, and sensible till within half an hour of his dissolution.

He was opened the same day at eight P. M.

The body was greatly extenuated, and emitted a very offensive smell.

The abdomen being opened, a turbid, brownish fluid, of a somewhat fæculent smell, amounting in quantity to about two pints, was found in its cavity. On the superior surface of the liver, there was an extremely thin incrustation of coagulated lymph, loosely attached, and, as it seemed, recently extravasated; and the peritonæal coat exhibited marks of slight inflammation. On the middle of the inferior surface of the small lobe these appearances existed in a somewhat greater degree, and were accompanied with a very tender and irregular adhesion of that lobe to the fore part of the stomach about its superior curvature. When the lobe was gently raised, there was seen in the stomach a hole of about a quarter of an inch in diameter, surrounded by a small livid patch in the peritonæal coat. It was situated at about two-thirds of the distance from the cardia to the pylorus, and corresponded with the middle of the inflamed lower surface of the left lobe of the liver already described. It did not seem to have been produced by laceration, or to have been surrounded with any impervious adhesion to the liver. The stomach was much larger than natural, nearly collapsed, adhering to the colon and pancreas, and every where pale on its peritonæal surface, except in the part before mentioned. Its substance was in general unusually thick; and it contained a good deal of fluid, nearly similar to what was found in the abdomen. In the cardiac portion, about the larger curvature, the villous coat was every where raised into numerous irregular rugose protuberances, of different sizes, some equal to a large Spanish nut.

They were at first supposed to contain fluid, but on being cut, immediately collapsed, and were found to be mere projections of the villous coat, detached from the muscular by interposed air, which escaped when they were cut or punctured. Farther onwards towards the pylorus, but not reaching it, there was an ulceration of an oval form, three inches in its longest diameter, and two in its shortest. It was bounded by well defined, thickened, and indurated edges; had throughout its whole extent entirely destroyed the villous coat; and had in its center the hole before described. The whole internal surface of the stomach was pale, and free from inflammation; and the cardia and pylorus altogether unaffected by disease. The spleen was much smaller than natural. Its upper and posterior part was in a state of irregular ulceration, by which much of its substance there was destroyed, and a few vessels only remained. From all other parts of it, the peritonæum, which was of an opake livid colour, separated almost with a touch, and exhibited the whole substance, precisely resembling a mass of black coagulated blood, without the smallest appearance of vascularity, or other organization. The intestines were generally inflated; and the colon contained hardened fæces.

No disease was found in the substance of the liver, in the pancreas, lymphatic system, or any other part in the abdomen, or in the thorax.

Ulceration of Stomach.—From the following case it appears that a man may die from a disease of the stomach without inanition, probably by its sympathetic

action on the heart, as a man dies from a blow on the stomach.

Mr. W., aged sixty-eight, a temperate man, fond of field sports, moderately fat, enjoyed good health till the winter of the year 1810, when he had a catarrh, which was violent, and of long duration. The following winter he suffered a relapse of the same complaint, but became much better at the latter end of January 1813. All these attacks were attended with copious expectoration, but were free from inflammation and fever.

At various times in the summer and autumn he had occasional heartburn, with water brash, or rising of copious saliva into his mouth; and on the subsidence of the last attack of catarrh, he began to suffer a dull pain across the hypogastrium, accompanied with a total loss of appetite, but without vomiting, fever, local hardness or swelling, or difficulty of lying on either side. This pain continuing with more or less of constancy, together with great prostration of strength, and very rapid emaciation, notwithstanding an adequate use of nutritious food, he, by the advice of Dr. R., of Northampton, came to Bath on the 21st of March, and put himself under my care.

On examining him in various positions I could discover no local disease, nor any evident increase of pain on pressure. He had not the smallest appetite; was free from sickness and thirst; had a clean and a tolerably moist tongue, a cool skin, and a pulse natural as to frequency and strength. I was informed that his bowels had been easily moved by medicine;

but as they were somewhat constipated by his journey, I recommended some gentle aperients, which at first produced costive and somewhat dark evacuations, and on the third day lax motions and of a natural colour. Some bitters were given him, but were discontinued on the 23d of March, when Mr. W. began to drink a small quantity of the Bath Water. On that and the following day, the water seemed to agree well; but on the morning of the 25th, produced immediate vomiting, and was never afterwards repeated. Vomiting took place again, after food, twice or thrice during the two following days, but recurred no more. What the patient vomited was of an acid taste and smell, free from bilious or other discolouration, and appeared to be merely the indigested contents of the stomach. In order to relieve this symptom, I gave him Magnesia and Tincture of Aloës, which operated gently on his bowels, but had no farther utility. On the 28th, I directed two grains of the Mercurial pill to be taken twice a day. This produced a sufficient, well coloured lax evacuation on the 29th; but on that day he became languid and drowsy, disposed to lie continually on the sofa, with much weakness of voice, coldness and lividness of the hands, a languid pulse of 72 in a minute, and a distant dizziness, as he called it, in his head. On that day he took to his bed, and from eight in the evening slept almost incessantly till seven the following evening. He complained, however, occasionally, but only when asked, of some dull pain about the pit of his stomach. He had had no stool, but had made about a pint of clear high coloured urine.

His pulse was 84, and full ; and his skin warm. He was free from cough or difficulty of breathing.

On the morning of the 31st, the pulse was 84, and soft ; and he had some involuntary catchings of his hands ; wandered occasionally in his mind, but slowly answered questions. In the evening his pulse was 90. No stool through the day. A glyster was given, but returned without a motion.

On the 1st of April, in the forenoon, the pulse was 72, and very weak. In the evening of that day, and the next morning, it was not to be felt. He had continued more or less in a state of drowsiness, with cold extremities ; but, though he still now and then wandered, occasionally answered questions, and knew me on the evening of the 1st. He had no stool, and passed urine involuntarily. His breathing now began to be in some degree laborious. This state increased till half past three in the afternoon of the 3d of April, when he died.

His body was carefully dissected at nine in the morning of the 5th, in my presence, by Mr. George Norman.

The cellular membrane of the thorax and abdomen contained a reasonable proportion of fat.

In the thorax, all parts were in a perfectly healthy state ; the lungs exhibiting no mark of inflammation, and the bronchial cells containing no fluid. The heart was loaded with fat.

In the abdomen, all the duplicatures of the peritonæum, including the alimentary canal, together with the omentum, contained fat in an extraordinary abun-

dance. There was no disease in any part whatever except in the stomach, which was considerably distended, and contained about half a pint of a dark, greyish brown, opaque fluid. The lower part of the pyloric portion was somewhat thickened, but not contracted or scirrhus; and all round it, for two inches and a half in length, the villous coat was in a state of ulceration, with thickened edges like those of a chancre, and having a surface of a dark mottled colour, with no secretion adhering to it. In one part a similar ulceration was continued forwards for half an inch in breadth and an inch in length.

The gall-bladder was full of bile, and free from gall-stones.

The spleen was unusually small.

There was no disease of the mesenteric or other glands.

Scirrhus and Ulcerated Stomach.—Mr. de L., who had long been affected with dark vomiting, and all the other symptoms of ulcerated stomach, was opened on the 14th of August, 1799, in my presence, by Mr. Grant, surgeon.

The liver, spleen, and all the viscera of the abdomen, except the stomach, were found in the natural state. A considerable portion of the stomach, about the pylorus, was converted into scirrhus, which, on the posterior part, was an inch in thickness. The inner surface of this portion was variously ulcerated, and covered with a slimy fluid of a dark brown colour. In one part of it, where the stomach was otherwise thinnest, the ulceration had penetrated so as to form

a small hole entirely through the substance of the stomach.

Probable Scirrhus of the Stomach.—Miss S., aged thirty-eight, was, about the month of February or March, 1808, suddenly affected with great uneasiness about the pit of the stomach, which was much increased by eating, but went off without sickness. In June she applied a blister to the epigastrium, from which time she began to vomit soon after a meal, seldom, however, at first bringing up her food, but what she called large balls of glaire or slime. These complaints gradually increased, till I, in consultation with Dr. Murray, visited her on the 10th of October. She was then very much emaciated, greatly troubled with flatulency, and almost every thing which she swallowed excited immediate vomiting, so that no solid food had been for some time taken, and fluids only in the quantity of a teaspoonful or two at once. A few days previously to my visit, a hardness had been discovered in the epigastrium, reaching, according to the description which was given me, all across as low as the right hypochondrium. On examination, a swelling and hardness were obviously to be felt in the epigastric region on the left side, apparently about the cardiac portion of the stomach, strongly resisting pressure, which produced to the patient a sense of rolling of wind, and also a hiccup. There was no pain, swelling, or hardness, about the seat of the pylorus. She lay equally well on both sides; but on making a deep inspiration felt some resistance to the descent of the diaphragm. The pulsation of the

aorta was very strong against the tumor, and below it, though there were no symptoms whatever of preternatural dilatation of that artery. She had never any signs of hepatic disease. Her tongue was very dry and parched, with clean polished edges; her pulse 84, and weak; her urine in small quantity, and of a deep flame colour.

Mercury had been applied externally, though not in a degree sufficient to affect her mouth; and her bowels had been kept open by a daily glyster, though it was said that till this almost total rejection of every thing which she swallowed, her bowels had been affected by four grains of *Extractum Colocynthis compositum*.

The mercurial frictions were continued, and small doses of Aloës, with other medicines, were exhibited, with no better effect than might easily be predicted. Miss S. left Bath, and shortly after her return home died.

It is much to be regretted that no dissection took place.

Thickened and Scirrhus Stomach.—In scirrhus stomach, vomiting is not always black, but sometimes yellow, from bile, as in Mr. I., still, however, rising to the top like yeast, and of a sourish vinous smell, and with great occasional heartburn. Mr. I., aged about sixty, who had long been affected with stomach complaints, for which he had, without relief, employed various remedies, came to Bath and put himself under my care. The following were the chief symptoms under which he laboured: He had almost constant

pain between the scapulæ, chiefly verging towards the left, and but little any where about the stomach or chest. He had no appetite, and was troubled with frequent eructations of a vinous odour and taste, which affected the nose like carbonic acid. He vomited more or less every day or two. What he thus evacuated was sometimes natural but sour; at other times yellowish, brownish, or tending to black, but almost constantly, on standing, throwing up a head like syllabub. The vomiting usually occurred at night, and always in some degree alleviated the pain between the scapulæ. Bowels very difficultly moved. Pulse slow, and weak. Skin cold. Body considerably emaciated.

There was no difficulty in deciding on the nature of this disease, or in predicting its event. Mr. I. died some weeks afterwards; and the Surgeon who attended him favoured me with the following account of the appearances on dissection.

“ The stomach was enormously large, occupying
 “ nearly the whole cavity of the abdomen, and extending nearly as low as the pubes. It contained
 “ a great quantity, viz. five or six quarts, of a very
 “ dark coloured viscid fluid. The stomach retained
 “ its natural figure; but the coats appeared thickened,
 “ and internally carried the marks of inflammation.

“ Both the upper and lower orifices were thickened,
 “ and appeared in a state of ulceration.

“ The whole of the viscera (except the stomach)
 “ were contracted, and much smaller than in their
 “ natural state. The small intestines were not above
 “ half their usual size, but full.

“ The liver was smaller than natural, rather pale,
“ but of a healthy appearance within and without.
“ The gall-bladder of its usual size and appearance,
“ and full of bile.

“ The spleen livid and small. The pancreas sound.

“ The heart unusually small—about half its natural
“ size. No great quantity of fluid in the pericar-
“ dium.—The lungs not deviating from a natural
“ state.”

Scirrhus of Stomach, &c.—Case of the Rev. S. A., aged about thirty-three, as given me by a medical gentleman long in habits of attendance on him.

“ From the age of twenty-five, Mr. A., had been
“ subject to a scorbutic eruption on the skin, which
“ at times disappeared. His appetite was always
“ moderate; and whenever the cuticular eruption had
“ been absent for any length of time, his powers of
“ digestion were in some degree impaired. About
“ seven years ago, he had a swelling of the right
“ knee, which threatened the loss of the limb; but
“ after a long and painful confinement, it was cured
“ by friction. About six months ago he complained
“ of pain and distention in the hypochondriac region.
“ The pain was almost constant; the distention
“ greatest after receiving food. His bowels were
“ inclined to be costive. Laxative medicines were
“ occasionally given, and Columbo root combined
“ with Soda taken daily in full doses. Some benefit
“ seemed to have been derived from this treatment;
“ but after a short discontinuance of the medicines,
“ the symptoms returned with increased violence.

“ There was a sensation as if the bowels were con-
“ tracted in their diameter; and the effort to evacuate
“ them was always attended with exhaustion, and
“ some degree of pain. The colour of the fæces was
“ healthy; but the size, when the consistence was
“ sufficient to retain the form, was small. There had
“ not for many months appeared any eruption on the
“ skin. The appetite was irregular, and the muscular
“ strength diminished; the pain in the stomach con-
“ stant, except when warm in bed; and the distention
“ very troublesome after meals.

“ A large pitch plaster was applied over the sto-
“ mach; the body clothed with flannel; friction over
“ the whole abdomen daily used; Calomel in small
“ doses given at night; and infusions of Gentian, Co-
“ lumbo, Quassia, &c. with Zinc, Steel, &c. at proper
“ intervals during the day. The peristaltic motion
“ of the intestines seemed not to be sufficiently active,
“ and purgative medicines became more frequently
“ necessary. Debility succeeded the action of these
“ medicines; but scybala were generally carried off by
“ them, and the pain and distention for a short time
“ after were alleviated.

“ The most important symptoms still increasing,
“ it was thought proper to use Mercury to a greater
“ extent; and the common Blue Pill was given in
“ quantity sufficient to affect the mouth slightly for
“ about a month or five weeks. Much advantage
“ appeared to have been derived from this remedy,
“ when the debility which it had occasioned had gone
“ off. Change of air was recommended, and Mr. A.

“ spent about a fortnight at Sidmouth. His sensations, while at that place, were more comfortable, and he seemed to have gained strength, but not flesh. On his return to the place of his residence, after a short time his symptoms recurred. Various tonic and dyspeptic remedies were tried without success, and he went again to the sea-side. After having spent a month on the coast, he returned, without having experienced any relief. On the contrary, the dyspeptic symptoms and debility had increased. A large blister was applied to the stomach, and an irritation induced on the skin by means of the Tartar Emetic ointment; and, among other remedies to open the bowels, pills containing chiefly Cathartic Extract were given, and proved fully adequate to the intention.”

Mr. A. came under my care, Nov. 7, 1808. He complained of loss of appetite, and a feeling of uneasiness, torpor, and constriction across the belly between the stomach and navel, which produced great restlessness, and either disturbed or wholly prevented sleep. His bowels were bound, and his urine rather small in quantity, at night depositing a pink sediment, and in the morning clear. He was free from preternatural quickness of pulse, and all other symptoms of fever; and his tongue was clean. On examining the abdomen, I perceived some resistance to pressure from somewhat above to somewhat below the navel; but no pain was produced, nor was the part of any definable shape.

The bowels were with difficulty opened; but, at

length, copious fæculent stools were obtained, of a dark brown colour, and entirely unmixed with mucus, or any other morbid secretion. After these evacuations his uneasy feelings were greatly relieved; he took food with an expression of pleasure, which I suspected to be mental rather than corporeal; and rested well. This evacuating plan was sedulously continued, in consequence of which, during the first three weeks of my attendance, he appeared to suffer no oppression or inconvenience from taking food, and the vomiting, to which he had been subject, returned only once.

It was, however, obvious, that the relief was not likely to be permanent, and that gradual emaciation was taking place.

Aperients, in different forms, were continued. The fæces were often tinged with fresh orange coloured bile, and were sometimes partly figured, though soft, forming cylinders not exceeding one-third of an inch in diameter: once only throughout my whole attendance, the medicines given produced watery stools. Glysters of Bath Water, administered at the Baths, with the machine there appropriated to this purpose, and copious injections of salt and water, usually operated tolerably well, even till two days before the patient's death.

About a fortnight before this period, I began to feel internal hardness, like a substance consisting of two angular and hard ends, lying across the abdomen about two inches above the navel, the larger angle being somewhat to the right. It was more than an

inch in diameter, and between two and three in length. When I attempted to press on this tumor, it receded, so that I could trace no continuity between the ends; though from their receding together, whichever I pressed, there could be no doubt that they belonged to one substance. After it had receded by pressure, it again usually advanced when the patient made a deep inspiration. It was free from soreness. Towards the last, it was easy to feel near the navel, for five or six inches in length, the bodies of the vertebræ, with the muscular parts adjoining, and the aorta pulsating all the way a little on the left. At this period the abdomen seemed to be altogether divested of fat.

During the last fortnight, Mr. A. began to shew marks of mental imbecility, at first by a preternatural versatility and capriciousness, and gradually by a forgetfulness, which caused him to ask the same question over and over again, sometimes even within the space of a few minutes.

From about a fortnight before his death, he was confined to his bed. About the same time his tongue became parched and dry, he entirely lost his appetite, and vomited every day, usually at night when he sat up to have a stool either from opening pills or a glyster. What he vomited was never discoloured, and was only what he had eaten reduced to a pulp. Through the whole of his illness, the faintness, sinking, or oppression of his stomach was relieved by stools, and still more so by vomiting. The stools which towards the conclusion of his disease occurred in the

evening, were procured either by a glyster of two table spoonfuls of salt dissolved in a pint of thin water gruel, or by three pills, chiefly composed of *Extractum Colocynthis compositum*, taken at five o'clock in the morning. These pills were never rejected by vomiting.

Mr. A. never complained of pain across his breast or in his back. Nor was he much oppressed by flatulency, though he had frequent acidity in his stomach, and occasional heartburn. The termination of the case will be best learned from the following short reports of the symptoms during the few last days.

Dec. 4. The pulse which for two days has been only 72, is now, while the patient is lying in bed, increased to 84. He begins not to be sensible of the lapse of time, and is in some degree incoherent. No stool or vomiting. Tongue very dry.—*Persistat in usu Pilularum.*

Dec. 5. Pulse 108, and rather stronger than usual. He has had a hiccup for a short time to-day. Urine in very small quantity. Tongue as before. He now begins not readily to distinguish persons.—*Persistat in usu Pilularum.*

Dec. 6. Pulse 108. About seven last night he had consistent but not figured motion, and then vomited copiously; since which he has had neither hiccup nor sickness, has taken more food than usual, dozes a great deal, and is less incoherent than for the two last days. Tongue dry. Urine still very small in quantity from difficulty in passing it.—*Repetantur Pilulæ aperientes.*

Dec. 7. Pulse 120, weak and intermittent. Had one small loose motion last night, and vomited largely, but to-day has had neither stool nor sickness, and has passed little or no urine. This morning he has been troubled with hiccup, and has been somewhat delirious.

Dec. 8. Pulse 128, and weak. Has had no stool, urine, or vomiting, but a good deal of hiccup. He is gradually losing his consciousness.—*Infundatur Enema solitum.*—*Persistat in usu Pilularum.*

Dec. 9. Pulse 138, and very weak. The glyster last night produced a large stool, but no flow of urine, and ineffectual attempts have been made to introduce a catheter into the bladder. Since the stool, he has had neither hiccup nor vomiting. He dozes almost constantly, speaking very little.

Dec. 10. Pulse in the radial artery not to be felt. Extremities cold. He is still in some degree sensible. The bladder is distended to within two inches of the navel.—At half-past eight in the evening he died.

He was opened on the 12th, between eight and nine o'clock in the morning, in my presence, by Mr. G. Norman.

Mr. Norman introduced a catheter through the urethra into the bladder; but no urine flowed. Strong pressure, however, being made over the pubes, it came in a full stream; and after the catheter was withdrawn, the flow still continued in consequence of the pressure, till three-quarters of a pint were thus evacuated. The bladder being opened was found still to contain full three pints of urine.

The whole body was extremely emaciated. When

the skin of the abdomen was separated from the muscles, no blood flowed, and the muscles themselves were scarcely different in appearance from the peritonæum.

The omentum was so entirely void of fat as to resemble a transparent film, beautifully streaked with blood-vessels. The diaphragm also appeared like a semi-transparent membrane.

All the intestines, except the colon, were smaller than natural; but were otherwise free from disease. The colon, from its commencement, exceeded the natural size, and from the beginning of its arch, instead of crossing the abdomen in the usual way beneath the stomach, passed up diagonally before the liver, as high as the diaphragm, whence it suddenly returned in a nearly parallel direction, and in contact with the ascending portion, so as to form a sort of elbow, lying on the surface of the liver which is naturally convex, but which had assumed a concave form, exactly corresponding to the angular turn of the colon compressing it. In this part of the colon there was no appearance of disease, nor was there any adhesion to the liver or any other part; so that we could not discover any reason for this extraordinary and unnatural position. The colon continued of the magnitude described, till about the middle of what should have been the sigmoid flexure, where it became suddenly less, and continued so to its termination in the rectum, except that in three different parts it swelled out into as many oval pouches, the smallest of which was an inch in diameter, and an

inch and half in length, and the largest about twice that size. The diameter of the smallest part of the colon was not more than half an inch. The coats of this bowel were, however, no where inflamed, thickened, or indurated, and admitted of very easy distention. Throughout the whole of its course, it contained a few ragged bits of somewhat hardened fæces, deeply tinged with brown or orange coloured bile. The stomach was large and thick, with the ramifications of the larger veins in the villous coat very distinct and beautiful; but with no appearance whatever of red, livid, or otherwise discoloured patches or spots, except two or three irregular flat marks, of a chocolate colour, near the pylorus. About the cardia there was no deviation from the healthy state, except that some minute glands about the lower part of the œsophagus were somewhat enlarged. The pyloric portion, for at least two inches and a half from the extremity, was becoming hard and scirrhus, being on the upper side one-third of an inch in thickness, and on the lower nearly two-thirds of an inch; in consequence of which the aperture was so diminished, as with difficulty to permit the passage of food into the duodenum. It had, however, suffered no inflammation or ulceration, unless the chocolate coloured marks before described might be considered as ecchymoses, threatening the latter state. In the stomach was contained more than half a pound of a pultaceous substance, of a dark lead colour.

The glands of the mesentery and mesocolon were for the most part enlarged and scirrhus; but none of them inflamed.

The liver, spleen, pancreas, and other undescribed parts in the abdomen were perfectly sound ; as were, also, the viscera of the thorax ; except that the heart was more flaccid than natural. The lungs were entirely collapsed, occupying a very small part of the thoracic cavity. There was no water in the thorax or abdomen, and scarcely any blood flowed out on cutting through the aorta and vena cava inferior.

Distinction between Scirrhus Pylorus, and Disorder of the Villous Coat of the Stomach.—In Mrs. B., an evident attack of peritoneal inflammation, was produced by what was probably gall-stone, as for two days there was great pain in the pit of the stomach, unaccompanied with fever, but attended by constant and violent vomiting, and on the third day with soreness, tension, pain, and great fever, relieved by leeching, &c., without yellowness. Sickness and vomiting followed, and continued for many weeks in the following way. She was always more or less sick, except when asleep ; but the sickness was increased by putting any thing into the stomach ; and this was always partly though not wholly rejected, at various intervals from a few minutes to three or four hours, after being swallowed. If milk, it was curdled ; and what came up was usually mixed with a small proportion of mucus, apparently in a natural state. Several weeks elapsed before any thing was ejected of a dark colour, but then, to this time, Jan. 20, inclusive, there were five or six times a tinge of brown through the whole liquid, or the mucus was streaked or spotted with a snuff-coloured substance, and once or twice with an

orange tinge, as from more recent blood. It was, however, often tinged with bile, which on being first evacuated was yellow, on standing some time became green. When any thing was retained, it produced a sensation in the stomach of weight and uneasiness, but not pain ; neither was there any thing of soreness on reasonable pressure of that part or the abdomen, nor could any hardness or swelling be discovered in either. She lay equally well on both sides, and could take a deep inspiration without the smallest inconvenience. The fits of vomiting were usually preceded by a cough arising from a tickling in the throat ; although that cough sometimes occurred without such vomiting. Towards the last, she vomited about twelve times in the twenty-four hours. She was at last cured by purging. Her bowels were not difficult to move, being pretty copiously acted on by the pills as beneath.

Pulv. Scammon. Comp. Extr. C, c. āā ʒj. in x. ii,
pro dosi.

AFFECTIONS OF THE LIVER.

Inflammation and Suppuration of Liver, resembling Gall-Stones.—Mrs. M., upwards of sixty years of age, who had been subject to frequent and severe fits of pain about the stomach, was at last seized with one which was accompanied with symptoms of acute fever, and terminated in death.

On examining her body seventeen hours after death, the integuments of the abdomen were found to be very much loaded with fat; the abdomen itself was considerably distended. Much fat was every where attached to the abdominal viscera. The liver was sound in its internal structure; but had some vestiges of inflammation upon the upper surface of the small lobe. On its lower side, surrounding the gall-bladder, there was a considerable degree of inflammation, and an exudation of a suety kind of matter. The gall bladder itself formed a shapeless

mass, so tender, that on separating it from the adjoining parts to which it adhered it was torn, and its contents, whatever they might have been, escaped into the cavity of the abdomen. The duodenum adhered to the gall-bladder, and to the lower part of the liver. The peritonæum also adhered to the omentum, from the epigastric region to the left hypochondrium; the adhesion being in breadth from three to four inches. The diseased surfaces were every where in a state of ulceration with much purulent matter interposed. Notwithstanding, from the circumstances above mentioned, no gall-stones were found, it is highly probable they must have existed, and produced not only former attacks of indisposition, but the disease which was the direct cause of death. There can be little doubt, however, that the morbid appearances discovered must have been gradually coming on for a considerable time previous to the fatal termination.

[Bath, May 1, 1808.]

Gall-Stones.—Col. M., about thirty-five years of age, was seized with sudden and violent pain in the epigastrium and right hypochondrium, unaccompanied with fever, and followed by the usual marks of jaundice. From these circumstances, I judged the complaint to be owing to gall-stones. No sooner had the symptoms disappeared, than they were succeeded by another attack, and this again by a third.

The circumstances were now essentially changed; for after his attendants, anxious to relieve his sufferings, had applied to the region of the stomach and bowels successive napkins heated to as great a degree

as he could bear, he was almost immediately attacked with great tension, pain, and soreness of the belly, especially about the right hypochondrium, accompanied with violent fever. It being evident from these symptoms that inflammation of the peritonæum had supervened, the most active remedies for the relief of that state were employed. Blood drawn from the arm had its crassamentum, when cooled, of a firm texture, and exhibited a thick crust of coagulated lymph, cupped at its edges. At length the marks of general peritonæal inflammation abated; but left the liver perceptibly enlarged, hard, and sore to the touch. The skin remained considerably tinged with yellow; the urine was of a deep orange colour; and the stools were pale. The original pain recurred at intervals, but in a comparatively slight degree. There was, however, constant fever, with loss of appetite, sleeplessness, and jactation, gradual emaciation, and prostration of strength. Thus the unhappy patient passed many wretched weeks, altogether without hope, and without relief, except from opiates, which, with an infusion of Senna, were, at length, the only remedies which it remained for him to employ.

At this period, after some aggravation of pain about the epigastrium, the pulse rose to 136 in a minute, and was very small and weak; the colour of the stools changed from white to black—they were loose and frequent; and the general debility increased to such a degree, that, according to all human probability, the patient could not survive forty-eight hours.

Then, however, the stools began to lose their black-

ness, and, for the first time for many weeks, to be tinged with natural bile. The pain ceased. The skin and urine lost their orange hue, and the fever gradually abated.

These symptoms of convalescence were soon succeeded by an evident increase of appetite, strength, and flesh ; and, at length, little remained of indisposition, but some enlargement and hardness of the liver, which viscus, however, was no longer, or only in a slight degree, painful to the touch.

Under these circumstances, after the lapse of some weeks, when all the first symptoms of indisposition had been long forgotten by the patient and his friends, while he was one day obeying an urgent call to evacuate his bowels, he was suddenly relieved by the passage of a substance, which struck with considerable noise against the bottom of the close-stool. This substance proved to be the gall-stone, of which the figure is an exact delineation.

Gall-Stones.—Mr. R. laboured under attacks of this disease for twenty years ; and as they were always unattended with jaundice, they were called spasms, and denied to arise from gall-stones. I told him that the want of jaundice was no proof of the negative. At last, nearly two years afterwards, a fit of pain exactly similar to those to which he had been before accustomed occurred, and was attended with jaundice, and he passed several irregularly shaped gall-stones of various sizes ; and came from Wales to Bath expressly to shew them to me, and to thank me for having predicted the truth.

It often happens that the existence of gall-stones in the gall-bladder, while the ducts are so far free that there is no appearance of obstructed or absorbed bile, produces a continual sensation of tightness about the epigastrium, which is extremely uneasy; and which is sometimes suddenly aggravated, though still without absolute pain, either spontaneously, or by the jolting of a carriage or horse. So in Mrs. T. in Pulteney-street, Feb. 1811.

The relief obtained by stimulants, and stomachics, in cases of gall-stones, seems to be merely derived from the diminution of flatulency; retention of ingesta, and other circumstances, merely acting as a mechanical cause of producing pain by pressure, when the gall-stone is at rest. So in urinary calculus; so in diseases of the heart, &c. The cure of these symptoms, therefore, does not cure the disease, but takes off one remote or accidental cause of paroxysm or aggravation.

Distinct Pains of Gall-Stone in Miss W. and others.—The pain of the effort to pass is in the pit of the stomach, between the shoulders, and extending sometimes to the right side. Besides which there is a pain affecting both sides at different times, which occurs especially in the horizontal posture, and which is evidently the effect of a hard substance pressing on the liver and adjacent parts.

Proof that swelled Liver may arise from sanguineous Congestion, without Inflammation.—The Rev. Mr. H. had evident marks of disordered liver, but, in consequence of supposed debility, did not undergo any process which usually succeeds in removing such

complaints. Among other errors, he drank wine freely. When I saw him, there was a considerable swelling of the liver, the inferior edge of which on the right side came low down towards the umbilical region, and was very hard. He had a constant wandering pain of a dull kind about the side and back; but the secretions were in a natural state as to appearance, and he was, during the day at least, free from fever. He was bled by my direction, and put on a suitable diet of the least stimulating kind, and had Saline aperients and Squill given him. His blood shewed no mark of inflammation. He had nothing of piles. These means were intended as a prelude to the use of Mercury; from which, however, I was deterred by the sudden coming on of hæmorrhage from the bowels, apparently not coming from piles.

These hæmorrhages frequently recurred, and after a much more violent one than usual, he was blooded in London by the direction of a Physician. After this, the pain entirely left him, and, as he tells me, the swelling of the liver altogether subsided.

It is astonishing to what a degree this swelling will go and then subside, after agues, as in Wm. F.

Affection of Liver.—Mrs. D., among many others, was for twenty-two years in India, and never had the smallest complaint; but in the year 1812, after twenty-four years residence in England, in habits of the greatest temperance, but fat, and leading a sedentary life, had sickness, loss of appetite, emaciation, a sallow and yellowish skin, a feeling as of a board all across the hypochondria, and a sensible hardness to

the touch, without any symptom of fever, or furred tongue.

These complaints continued many months ; but all the consequences of the malady were at length cured by three grains of the *Pilula Hydrargyri* taken twice a day for ten or twelve weeks, together with the occasional use of four grains of *Extractum Colocynthis compositum* at bed time. The mouth was never affected.

During the disease, there was never any fever, the nights were good, and the stools had always at least the due admixture of bile, which was sometimes too dark, but more usually of a natural orange colour.

Scirrhus, in the liver, following swelling, from over-full vessels. When Mercury acts in curing swelled livers, it must be in the former state of vascular fulness, and certainly not that of actual scirrhus. It is necessary, therefore, not to mistake the cases ; as in that of scirrhus it must be injurious by increasing the general action of vessels, and, perhaps, promoting absorption, which in such a case is ulceration.

General Laxity of Vessels produced by various causes which affect the liver at the same time, is attributed to the affection of the liver itself ; such are, probably, piles, epistaxis.

Abscess in Liver passing off by the Bowels.—Mr. M'D. about thirty-eight years before I attended him, had an inflammation of the liver, with fever, pain in the right shoulder, a swelling in the hypochondrium, which was as large as an egg, sore on pressure, and prevented him from lying on the left side. It dis-

appeared in one night, as was supposed from breaking into the bowels, and going off by stool. He then recovered, but was for some years subject to pain in the part on violent exercise.

The *jaundice* in the cold fit of an ague depends on the blood accumulated in the liver, producing more secretion than can be carried off. The urine is dark coloured, though the stools are dark also. There is therefore no obstruction. [1796.]

Tea, &c. produce *white stools*: whence it follows that the secretion, and therefore the state, of the liver is influenced by the state of the alimentary canal. On the other hand, in the healthiest men, long nausea, sea sickness, and various purgatives, produce a preternatural flow of bile.

Suppuration of Pancreas, &c.—Thomas N., esq; aged fifty-six, a strong-made man, above the middle size, who had been many times to and from the East-Indies, had long enjoyed good health, except from the gout, under which he had for twenty years laboured, so as to have various joints much crippled. About five months previously to my attendance he found his appetite decline, except for dainties; and began to have a sense of fulness and weight in his chest after eating, feeling, as he afterwards expressed himself to me, “like a gorged snake,” so as to be obliged frequently to rise from table. This symptom increased, especially while he swallowed solids, and afterwards, with great flatulency and total loss of appetite, till about a fortnight before I first visited him on the 4th of June,

1808, when he began to vomit almost every thing of a solid kind the instant it was swallowed. This effort of vomiting was a sort of convulsion, rather than the effect of sickness. He complained, while almost any thing was passing into the stomach, of great uneasiness, or rather dull pain, from about the middle of the sternum up to the throat, across both sides of the breast, and between the scapulæ, with flatulency, and a burning heat in the breast and throat. These symptoms were indeed scarcely ever wholly absent, but, as I have before observed, were greatly increased by ingesta, especially of a solid kind. The food was thrown up in the same state as when swallowed, and the act of vomiting produced great increase of the pain. By degrees the same symptoms occurred after swallowing any kind of liquid. He was unable to take exercise, and the pains did not appear to be increased by any particular position. I examined all the parts about the abdomen, but found no swelling or hardness, nor was there any pain in the epigastrium on moderate pressure. Till somewhat before I first saw him, about the period when the vomiting commenced, the bowels were opened by moderate doses of *Extractum Colocynthis compositum*, or *Magnesia*. But I found him taking daily twelve or fourteen of the Black Drops; and then it became necessary to give him larger doses of aperients, as eight grains of *Aloës*, in doses of two grains every six hours.

It is proper to mention that about the latter end of May he had for several nights, about the hour of going to bed, great coldness, but not actual shivering. I

gave him purgatives of Calomel, mixed with other medicines, and afterwards one grain of the same medicine twice a day, the disease seeming to me to be scirrhus of the cardia.

About this time, he was now and then, for two or three days together, affected with gouty inflammation in his fingers and feet, without any relief of his other symptoms. In a few days, his mouth became affected by the Mercury, and then, early in July, Dr. Falconer was called into consultation. From this period Mr. N. complained of little difficulty in swallowing, but much pain and fulness after ingesta, together with burning heat, in his stomach and throat.

About the middle of July, he began to throw up some brown stuff, like streaks of chocolate, tinging the mucus which he vomited. He also vomited some small portions of blood, and with them some lumps like hardened purulency, amounting altogether to about a drachm. His stools had in them about the same time a little florid blood, probably from piles.

He was now daily losing flesh, scarcely any thing being retained, or indeed swallowed; and his stomach being now affected with constant sickness, which seemed to be just alike, whether his stomach was empty or not, and which was in no degree relieved by vomiting. After swallowing any thing he often complained that he felt as if his stomach was raw.

Opiates, in no form, would remain on his stomach. Opium was therefore administered in glysters, in the quantity of from two to five grains every day, or every other day, as the sufferings required; and the bowels

were from time to time opened by glysters of Muriate of Soda or Soap. In this manner Mr. N.'s sufferings were much alleviated. His tongue was always covered with more or less of a greyish fur, which became darker as the disease advanced.

His sleep was constantly much disturbed by the recurrence of the uneasiness in his stomach, except when it was quickened by the opiate.

He had never any shiverings, or heat on his skin, which was always extremely dry. His urine was somewhat higher coloured than natural, but had never any sediment.

On the 26th of July, his pulse, which had before been nearly natural, rose to 96 in a minute, and continued so the next day. On the 28th it was at 120; and now his head became evidently affected with a mixture of quickness and desipency. He complained, also, that he could not see. On the 29th, the pulse was somewhat slower, but a little intermittent. On the 30th it rose to 132, and was weaker; and he was affected with twitchings of his hands. This day he vomited up something like a portion of fæces, two inches long, rounded at the ends, and of the size of the fore-finger; which proved to be a brown coagulum of blood, of a fibrous texture. On July 31st, all the symptoms were worse; but he still sat up and conversed. August 1st, he was insensible and stertorous, and at half-past four P. M. died.

He was opened at ten the next morning by Mr. Tudor, in my presence.

His body, though much reduced from its usual

degree of fatness, was by no means considerably emaciated. About the stomach there was no external appearance of swelling.

The cartilages of the ribs were much ossified on the right side of the thorax, and wholly so on the left.

The lungs were in a healthy state.

The liver, on its fore part, and throughout the right lobe, was sound; but the left lobe was more flaccid than usual, and there were various adhesions between its lower side, the stomach, the omentum, and the ribs on the left side. This lobe being lifted up, one of the adhesions gave way, and discovered an abscess formed between the lower side of the lobe, and the upper side of the pancreas. The sides of the abscess were very rugged and uneven, and the neighbouring part of the liver was irregularly scirrhus. The abscess was at least four inches in its longest diameter, surrounding the large vessels between the liver and spine, and full of a white, thick, curdly matter, free from fætor. It occupied the space of much of the smaller curvature of the stomach, pressing on the cardia, and on the œsophagus just as it entered the diaphragm. The lower part of the pancreas was hard, and knotty.

The stomach was very large, and extremely vascular. Its villous coat, especially towards the cardia, was full of spots and minute points of a red colour, as though it had been injected. The cardia itself partook of the same preternatural redness, but was otherwise free from disease.

The œsophagus, from its lower end where it was in contact with the abscess, was hard, knotty, and con-

tracted, being full of enlarged glands, which passed through its substance, and continued up through the whole of its thoracic portion. These glands were, for the most part, in an ulcerated state.

The gall-bladder contained full five ounces of yellow bile, and was free from concretions.

Necessity of Rest in cases of visceral Inflammation.—In inflammation of the liver in Mrs. P., it appeared as if getting up, and more especially going into the next room, brought on a new attack, or aggravation of that subsisting.

AFFECTIONS OF THE BOWELS.

Affections of the Stomach and Bowels, though not at the time perceived, often produce a tendency to vertigo, and to sweating on slight exertions. Both states are accompanied with preternatural torpor of the intestinal canal. As soon as the vertigo takes place, there is an evident feeling of return of peristaltic motion ; and when that movement returns, the disposition to faint sweating subsides or diminishes.

In Stomach and Bowel Complaints, the disease does not always occur as soon as the cause, improper diet, for example, is employed. So in colic from lead, and paralysis from arsenic. The part is perhaps predisposed, or brought into a state just verging to disease, or to an effort towards recovery ; and some failure of the counteracting power, or the co-existence of some noxious cause, in one case, or some circumstance calling the part into reaction, on the other hand, either local or general, makes the part fall into the state of apparent disease, long after the original cause has been removed.

Affections of Mucous Membrane of Alimentary Canal.—1815. In mortifications, and dispositions to it, the mucous membrane of the alimentary canal is very much affected, and dark vomitings and purgings from extravasated blood take place.

Throbbing, with Pain in Bowels.—In Colonel Q., August 15, 1808, the pain of bowels having a throbbing corresponding with the beating of heart, probably from increased determination in the arteries of the part, was relieved by nothing but very copious and long continued purging. Pulse 120. Head at the same time giddy, with throbbing of temples.

Spasm and Gall-Stones.—In Mrs. W., highly nervous, a spasmodic pain of the recti abdominis muscles, extending in various directions, and accompanied with hysterical eructations, was by her physician mistaken for gall-stones.

Sleeplessness in Bowel Complaints.—One of the effects of ingesta which disorder the alimentary canal without local effects, is sleeplessness, without any apparent mental cause, or any other local disorder.

Pulse in Inflamed Bowels.—In Miss Louisa J., aged eight months, with tense and swelled belly, sore on pressure, the pulse on the third day was 213 in a minute, strong and distinct.

Disordered Stomach and Bowels.—It is certain that some particular states of the alimentary canal may produce considerable disorder of other functions, without being themselves at the time perceived to exist.

This is the case with regard to the obfuscations of vision, and corruscations of light, which I have described

myself as having frequently experienced, and also of those evanescent colours and forms which I have already remarked; all of which have occurred without any present perception of inconvenience in the stomach or bowels, but which have always vanished by the removal of an indefinite quantity of wind from some uncertain part, often without its being evacuated.

So, also, it has many times occurred to me, when I have gone to bed in good health, to find either an utter incapacity to sleep, or more usually a feeling of tremor and misery, just as I have been on the point of forgetting myself, which has suddenly roused me; and this has been repeated many successive times.

I have observed that this latter state has been most frequent when I have been lying on my back; and it has been usually accompanied with very uncomfortable feelings about the head.

During this time, I have had no sensible disorder of the alimentary canal. Sometimes I have felt a cessation of all inconvenience by merely turning on my side and remaining there; but more frequently it has gone off immediately on the shifting of wind from some part of the alimentary tract; and it has always happened that, if the same thing has perceptibly taken place by pressure on the carotid artery, or on the abdomen, or by turning on my side, I have then been able to return to my position on my back, and have gone to sleep without the least threatening of the uncomfortable symptoms.

Palpitation of the heart, and different degrees of weakness or irregularity in its motion, will often arise

from a similar cause, without any perception of disordered stomach or intestines, and yet will cease immediately in the same way, or from an alvine discharge.

Affections of the Alimentary Canal.—*Dyspepsia* is probably some over-fulness of the vascular substance of the stomach and colon, producing morbid sensibility and irregular actions; sometimes costiveness, from spasms overcoming the peristaltic motion; sometimes diarrhœa, from increased mucous secretion. It is diminished by blood-letting, &c. Colic is, probably, a greater degree of the same spasm, from the vessels in the colon having been more filled from the poison of lead, or other causes, more powerfully overcoming the common peristaltic motion. Inflammation is a still greater power of the same kind, sometimes extending to the whole peritonæum, as in the case of S. who died with swelled belly, without fluctuation, notwithstanding copious purging stools.

What are called *Bilious Fevers*, which are of various duration, from a few days to some weeks, as in Mr. C., attorney, are to be cured only by long continued purging, which excites a great flow of bile by its stimulus on the ductus communis of the liver, which is only an effect and not a cause, as in Mrs. S., Marlborough-buildings. So also bilious attacks, as they are called, or spontaneous purgings without fever, all which arise from a morbid determination to the coats of the bowels, carried off by the mucous glands, sometimes accompanied with blood and mucus, and often following or alternating with long costiveness.

The *gouty* case in the bowels is of this kind, as in Mr. S. and myself.

It is a proof of these different degrees, that at the same season of the year, and in the same epidemic, one person shall have stoppage and inflammation of the bowels, others peritonitis, and others the bilious attack with vomiting and diarrhoea, which spontaneously prevents the fatal tendency of the other states. If these purgings are prematurely stopped by opiates, the head is affected; sickness and greater pain are produced; and if they are not assisted by purgatives, the disease is of longer duration. They occur after long hot weather, when the nights begin to be cold and damp, with or without fruit, &c.

The *Worm Fevers*, as they are called, of children, are a similar determination to the bowels; with tension and soreness of belly, and a purging of stools full of curdled substances, which are filaments or portions of coagulable lymph often mistaken for worms, and sometimes blood.

The *Swelled Bellies* of children, accompanying rachitis, are probably a fulness of the vascular substance of the alimentary canal, producing, from want of action, a tympanitic distention, and to be relieved chiefly by purging.

In all these cases, and in Erysipelatous Inflammation, Melaina, Aphthæ, and Hæmatemesis, if the complaint is not removed, *dropsical effusions* into the cavity of the abdomen frequently occur, as in D.'s child: frequently also adhesions. The connection of these complaints with agueish symptoms, and ague

itself, as in Mrs. S., deserves much consideration. They have marsh miasmata, and other similar causes, in common. In Mrs. B., a shivering of several weeks standing, every other day, with febrile pulse of near 130, was cured by one dose of Calomel and subsequent purging.

Singular and fatal Accumulation of Fæces.—Doctor C. for many years suffered from severe dyspeptic complaints, and frequent acid vomitings. His bowels were also liable to great flatulence, and, for the last year of his life, to great irregularity in their functions.

In the last days of October 1804, he was seized with severe colic, and considerable nausea, without vomiting, which was removed by divided doses of Antim. Tartar. The medicine excited mild vomiting, and several loose stools. Conceiving, from the nature of the discharge by stool, that his disease had originated from indurated fæces, Dr. C. took P. Rhei. gr. xij. every night at bedtime, which for about a fortnight gave him two, or occasionally three, rather loose stools daily. On the 11th of November he discontinued the Rhubarb, believing, from the flatulence, and sense of sinking, and general uneasiness of his bowels, that its effects were too considerable. On the 12th he had one motion only, of more consistence, but not costive nor deficient in quantity, yet in the evening he felt full, with some uneasiness in the abdomen and stomach, and loss of appetite. His uneasiness increased during the night, which he passed without sleep. The next morning he nauseated

his breakfast, passed a very small quantity of very adhesive fæces, and on attempting to visit his patients suffered so much increase of pain, that he was compelled to desist. As the pain increased, nausea, and at length vomiting, came on; and his medical advisers, apprehending inflammation, twelve ounces of blood were taken in the evening. The pain never entirely left him, but was at times much increased, and, though general over the abdomen, was most severe from the epigastric to the left hypochondriac region. Whatever he attempted to take, both of medicine and food, was rejected by vomiting. Dr. Fenwick was first requested to visit him, on the evening of the 14th, and reached ——— about midnight. The vomiting was then suspended, Dr. C. being under the influence of opium, as was also the pain of the abdomen, which was soft, and bore pressure without uneasiness. His skin was soft; his pulse only 80, and full and soft; his countenance natural; urine high coloured, but not more so than might have been expected after long continued vomiting, and no liquid being retained for thirty-six hours. No symptoms of fever had marked the accession of the attack, or the progress of the disease. Concluding that no inflammation existed, but that torpor of the bowels was the chief cause of the constipation, unless, indeed, organic affection existed, Dr. Fenwick, with Dr. Ramsay's concurrence, advised divided doses of Calomel at first, with Cath. Extract, then with Scammony, Jalap, and Aloes, and Gamboge, in succession; while warm baths, purgative injections, and injections of

large bulk, to act by distention, were used. On the failure of these means, the affusion of cold water was thrice employed; milder purgatives, as Magnesia Vitriolat. and ultimately Ol. Ricini, were had recourse to; the Calomel at the same time being continued, with an intention to saturate the system.

On the 17th, about noon, Dr. C. first felt the mercurial taste in his mouth. About the same time an injection, with Fol. Nicot. ℥j or ℥ij to a pint was thrown up, and repeated about four hours after. With the second injection some fæculent matter passed, and from that time Dr. C. continued to pass several thin stools daily, recovering at the same time sufficiently to resume his professional duties. No hardness, or pain on pressure, was found, on the most careful and repeated observation of the different medical gentlemen who attended. A slight soreness of the mouth was kept up for about a week. Dr. C. then had recourse to some laxatives, such as Tinct. of Guaiacum, Aloës, Aloës with Calomel; and at the same time took, twice a day, a few grains of Calumba and Rhubarb; but, notwithstanding, had in about three weeks another attack. By these medicines he had usually two, or even three, small thin discharges by stool daily; but though he continued their use, their effect ceased on the day before the attack. On that day, he had only one rather small plastic stool; and though he instantly had recourse to powerful purgatives, constipation ensued, and continued with severe pain, sickness, and vomiting, for two days. At length a large discharge of bile took place, which was

immediately followed by several loose stools, and the pain, &c. went off. There had been no want of bile in the stools; but the urine became high coloured the day before the attack, and let fall a lateritious sediment. No other febrile symptoms. After this attack, as after the first, no hardened fæces of any bulk, or other body that could account for obstruction, passed. In this manner a succession of attacks, differing in duration and severity, took place, each preceded by a change in the alvine discharge, which became more consistent, more scanty, and adhesive, in a few instances, being less coloured by bile, at others having a full proportion of it.

Of the attacks it may be observed:—1st. That the purgatives employed seemed to have no effect in obviating them. 2. That purgatives never succeeded in removing the constipation, till continued vomiting and full discharge of bile took place. 3d. That the solution of an attack was never followed by any figured stools, nor by return of appetite, or any symptom of returning health. 4th. That the vomitings always at first consisted of viscid mucus, and the stools were much mixed with it. 5th. That the acid vomitings, of which Dr. C. had complained for years, for some time suddenly left him, and returned as suddenly, without apparent cause; a thing which gave rise to a suspicion of gout mixing in the complaint, wandering pains at the same time taking place in his feet and hands. 6th. That no hardness, or permanent fulness, could be found in any part of the abdomen, except over the stomach, and stretching into the left hypochon-

drium, where distention was found previous to each attack, and during it. 7th. That about the middle of February the irregular distentions and contractions of the bowels, which at first only took place during attacks, became nearly constant, affecting him very frequently every day. 8th. That, in the end of January, a dark brown mucus was first discharged by vomiting, which colour it did not owe to an admixture of blood. 9th. That about the same time faecal vomiting seems, by the patient's own account, to have taken place. 10th. That the faeces, in the beginning of March, began, *occasionally*, to be figured, of about the thickness of a large pencil, and flatted at the edges, as if bearing the impression of a stricture. 11th. That the pulse was wonderfully steady, the countenance little altered, the skin generally soft. 12th. That peritonæal inflammation appeared ten days before death.

The treatment was, by a variety of laxatives; distending injections of Bath Water; the warm bath; pumping Bath Water on abdomen; opiates; tonics, of which the state of the stomach did not permit a full trial; and frictions. The diet was liquid, but as nourishing as the stomach would bear. Dr. C. complained much of constant bad taste, and had at last nidorous eructations.

In addition to this copious and able delineation of the case by Dr. Fenwick, I have to add that I attended Dr. C. only a few days before his death, when he had general swelling and soreness of the abdomen, a very quick pulse, and every other symptom

of peritonæal inflammation. The fæculent eructations and vomiting continued to the end of life.

Dr. C. was opened by Mr. Norman, senior, on the 21st of April, 1805, twenty hours after death, in the presence of Dr. Haygarth and myself.

The body emitted a most offensive smell. The abdomen, though still warm, was greatly swelled, and its skin livid.

When opened, the parietes were found generally adhering to the abdominal viscera by peritonæal inflammation; and the peritonæal coat of the latter was here and there covered with crusts of coagulated lymph. The omentum also every where adhered, being in some places preternaturally extenuated, in others thickened, and throughout in a state of hardness resembling scirrhusity. From two to three quarts of a whey-coloured fluid were found in the cavity of the abdomen.

When the parietes were drawn aside, the most striking object was the colon, the arch of which occupied the space usually filled by the stomach. It was enormously distended, certainly to not less than three times its natural size, and by its great bulk had driven the stomach and liver out of their places, high up into the thorax. The peritonæal coat of the whole colon and ileum was of a dark colour, which was deepest about the head and arch of the colon.

In order that the examination of the alimentary tube might be accurately made, it was opened throughout its whole length, and the intestines were taken out of the body.

The stomach was in every respect in a healthy state, except that the pylorus was contracted, and, as it were, cartilaginous, so as to oppose a firm resistance to the point of the fore-finger, which could scarcely be made to pass through it. The duodenum and jejunum were, within and without, in a natural state. The ileum was preternaturally dilated, and within of a dark colour; but much less so than the colon, which was almost black. The dilatation of the colon extended to about the beginning of the sigmoid flexure, where it resumed nearly its natural size. Throughout its whole tract it contained an immense quantity of fæces of the common colour, partly solid and partly fluid; and a yellow fæculent fluid, similar to that which had been vomited, was found in the ileum, jejunum, duodenum, and stomach.

There was no diminution of the usual capacity in any part of the alimentary canal, from the pylorus to the anus; though, in several parts of the colon, the coats were thickened, so as to form slight contractions comparatively with the morbid dilatation of other parts.

The spleen and kidneys were in a sound state.

The liver was contracted, and of a dark colour.

From the peculiar circumstances of the case itself, and of the dissection, the smell was so intolerably offensive, that we were unable to examine other parts of the body.

Singular Stoppage of the Bowels cured.—Miss Anne W., about forty years of age, was seized with great pain in her bowels, and symptoms of stoppage, on the 11th of December, 1803; her last motion

having been on the 9th, in consequence of some aperient pills taken the preceding evening. She had frequent strainings without vomiting; and took Castor Oil, Senna, Jalap, compound Extract of Colocynth, Gamboge; employed Glysters of various kinds, among which were those of infusion and smoke of Tobacco; was blistered and fomented; and used the tepid bath, all without effect.

I first saw her on the 19th. The abdomen was extremely swelled, tense, and sonorous on being struck. She had frequent fits of violent pain; was very restless, extremely desirous of changing her posture, but on account of the extreme soreness and swelling of her belly, could not bear the recumbent posture more than a few minutes at once. Her pulse was 110 in a minute, and moderately strong.

She was ordered glysters of the common decoction, saturated with sea salt; two scruples of Crystals of Tartar, every two hours; a solution of half a grain of Tartarized Antimony in six ounces of Infusion of Senna, which she took, without sickness, in ten hours; and affusion of cold water on the lower extremities and abdomen, which was employed thrice, for five minutes each time, at the interval of two hours. Still no motion whatever was obtained.

As she lived at the distance of twenty-six or twenty-seven miles from Bath, I did not again see her till one o'clock in the morning of the 22d. Her belly was swelled to an enormous size; but she then suffered little pain, was free from sickness, and had no disposition to a motion. There was a frequent

rumbling and loud noise in her bowels, precisely like that of decanting liquor out of a quart bottle. Though extremely weak and faint, she was unable to remain in bed. Her pulse was 156 in a minute ; her extremities and skin cold, and bathed in sweat.

A large saturated solution of salt was now thrown up, but returned without fæces. A candle of about twelve inches in length, and twenty-four to the pound, and lubricated with oil, was wholly introduced into the rectum. At the end of four or five hours, the wick, which alone remained, was taken away, and another candle of the same size introduced. Half an hour afterwards, a solution of soap in rain water was thrown up with a double injecting syringe. Not more, however, than a pint could be injected, all afterwards returning by the side of the pipe. At half past twelve at noon, on the 22d, the salt injection was again ineffectually tried. Thirteen days had now elapsed without a stool.

At one o'clock, a third candle of eighteen to the pound was introduced. At four, a disposition to stool took place, and some excrement came away, with the wick, and part of the candle. About six, there was a larger motion ; and at eleven at night, a much more copious one passed in bed.

From that time to the 24th, when I again saw her, there had been six or seven other stools, which were very loose. The swelling of the abdomen was nearly gone ; and the pulse was 110, and full.

She recovered without any farther difficulty.

Mechanical Obstruction and spontaneous Rupture of the Colon.—June 21, 1812. Mr. B., aged about sixty, has, till within these few years, enjoyed very good health, though from his youth subject to great discharges of blood from piles, which have ceased for the last three or four years. Since that time he has had occasional fits of sickness, which have been removed by spontaneous or artificial purging, without any appearance of disorder in the organs which furnish the bile. In October last he had a shivering, succeeded by slight fever, which might possibly have arisen from cold, accompanied with some fatigue. This indisposition was removed by gentle evacuations.

About the month of February or March, he began, for the first time, to experience difficulty in procuring stools, and was obliged to have frequent recourse to various aperient medicines. This state has continued increasing till the present time, when no medicines appear to have any effect in opening the bowels. The last fæculent discharge from the colon seems to have been June 13, when he was purged by a dose of Senna. The belly is tense and hard, sore on pressure, and with a considerable prominence evidently occupying the situation of the arch of the colon. Fits of violent pain often occur, chiefly about the lower part of the sigmoid flexure, where the bowel occasionally swells out in pouches, which subside when the contents shift their place with a rumbling or gurgling noise, after which the pain is for a while relieved. There is an almost constant feeling, as if a motion was about to take place, and a conviction

that all the symptoms would be cured by a free evacuation. The fæces which occasionally pass are hard pieces, broken, of a rounded form, and as large as the fore-finger, usually not more than an inch in length ; but once or twice, three or four inches long, and all together, at one stool, making up six inches or more. The motions are unattended with mucus or blood. Wind rarely passes. Appetite variable, sometimes good. Urine rather high coloured. Tongue clean. Skin cool. Pulse about 72, and soft.

From these circumstances I have inferred the existence of mechanical pressure, not in the rectum, but in the lower part of the colon. Glysters having been consequently tried, have been admitted only in small quantity, and produced great pain. A rectum bougie has been since introduced, by Mr. Morgan, apothecary, and passed easily six inches and a quarter ; after which the resistance and pain were so great, that all attempts to proceed farther were for the time discontinued. No motion followed.

June 22. Various medicines have been given without effect, and a glyster was last night attempted, but only a small quantity of the fluid would pass. This morning the bougie was again tried, and made to pass full ten inches, with difficulty, with less pain, and without corrugation ; but a hiccup immediately followed its introduction, and has occurred at various times since. Only two or three small bits of fæces have been evacuated since the last report, and once or twice a little mucus tinged with blood. His night was very bad, from the frequent attacks of pain, beginning

from the left groin, and followed, as before, with rumbling of the fluid contents of the lower bowels from the part; after which the pain has for a while lessened, till another fit of distention has produced a similar course of symptoms. He has complained of much heartburn; has been sick, and brought up a good deal of dark brown coloured liquid, part of which is like mucus. It is not impossible that this colour may have been owing to aloëtic and other medicines. What he has vomited is acid and bitter. Pulse the whole of this day 80, full, and strong. Urine high coloured, and occasionally turbid.—Let a long small tallow candle be immediately passed upwards as high as possible, and remain till it melts away. Let effervescing draughts of Potass be given every four hours, and three quarters of a grain of Opium at bedtime.

June 23, seven P. M. The candle was driven up several inches, and remained till it was melted away, but came back without any stool, a small quantity of blood appearing towards the upper end of the wick. Nothing has passed, but a ragged bit of fæces as large as a nutmeg. A grain and a quarter of opium were given, and produced occasional sleep, which, however, was frequently interrupted by the fits of pain, followed by the rumblings as before; and these have continued to recur through the day. The draughts are grateful to the palate, and the first only was rejected. There has been no subsequent vomiting; but hiccup has returned at times, especially when he has moved. For these two days he has kept his bed. His pulse

this morning was 84, very strong, full, and hard; and his tongue dry. Five leeches were applied to the verge of the anus, and drew well; and a glyster was attempted, but gave great pain, and passed only in small proportion. Pulse this evening 68, still very hard, and full. No headach. The bowels are tumid, and the course of the colon is easily to be felt from the upper part of the sigmoid flexure, transversely to the right side, enlarged and hard, especially during the fits of pain, but less so when the contents have rumbled away.—Let the Saline draughts be continued, and a draught of *Magnesiae Sulphatis* ʒjss. be given every six hours. Let the bougie be introduced as far as possible by gradual and repeated efforts, and be suffered to remain in the bowel as long as the patient can bear it; and afterwards let a grain and a half of opium be given.

June 24, seven A. M. The bougie was last night introduced, by Mr. Morgan, full fourteen inches, though with great difficulty, and was retained nearly an hour, when it was withdrawn, from having produced much pain, without any tendency to evacuation. From about the 9th to the 11th inch, the surface of the bougie is roughened and corrugated, but has no tinge of blood, mucus, or fæces. The hiccup has occasionally returned; and the fits of pain and increased distention have been more frequent and violent, followed, and in some degree relieved, by the usual rumblings. The swelling and tension of the belly have increased, and there is an evident aggravation of the general soreness about the belly. He has

evacuated a little wind ; but no stool whatever has passed ; and the urine is very high coloured, and occasionally turbid. Tongue rather dry ; but scarcely furred. Pulse this morning 80, this evening 84, and very full and hard. A glyster has been ineffectually attempted ; but he requests that no operations of a local kind may be again employed. Let the draughts of Potass be repeated, and three-quarters of a grain of Opium be from time to time given, as the pain may indicate.

June 25, seven P. M. Four of the pills have been taken, and the pain has occurred less frequently, and in a slighter degree than before. He has been free from hiccup and sickness, but has passed neither wind nor fæces. Pulse 80, and hard. He has taken no food, but has drank with relish a good deal of soda water, and some cold tea.—*Pergat in usu Pilularum et Haustuum.*

June 26, eleven A. M. He has taken a pill with three-quarters of a grain of Opium, and a draught of Potass in the state of effervescence, once in six hours ; and has passed a tolerably quiet night free from sickness and hiccup, and with fewer and less violent fits of pain. He occasionally feels somewhat more of natural griping than before, and is desirous of taking some oily aperient medicines. The belly is more tumid and sore to the touch ; and there is a larger swelling across the abdomen above the navel, putting on the shape of the colon, the seat of whose arch it occupies. The fits of pain uniformly seem to begin from the lower part of the belly above the pubes on the left side ; are always accompanied with temporary increase

of swelling just above ; and for the most part cease, as before, when the contents of the bowels rumble away, after which the lower swelling subsides. Tongue somewhat dry. Pulse 74, and hard. It was directed that the pills of Opium should be continued, and some draughts with Oleum Ricini occasionally given.

One only of the draughts was taken ; and towards evening the pain and tenderness very much increased. The tongue also became more dry ; the pulse rose to about 84 in a minute ; and there was some oppression of breathing. About half-past five in the morning his servant was alarmed by a sudden and loud noise, immediately followed by a less violent one, which he at first attributed to some person having knocked twice with his knuckle against the door. He was, however, undeceived by the sudden starting up of Mr. B., who cried out that he was in violent pain, and declared that "one of his guts " had burst." Mr. Morgan was sent for, and saw him within half an hour. His pain continued ; and his pulse was in so weak and fluttering a state, as scarcely to be felt, and to threaten immediate dissolution. From this period he experienced occasional disposition to go to stool, and once passed some wind from the rectum. He had no sickness or hiccup, and was free from all disorder of the head. His weakness gradually increased with oppression of breathing, till he became unable to speak, and in a quarter of an hour afterwards, at eleven o'clock in the forenoon, he died. I saw him just as he was taking his last breath.

The pupils of his eyes were dilated, the eyes half open, and the lower jaw fallen.

The abdomen was opened the same evening at seven o'clock, by Mr. G. Norman, in the presence of Mr. Morgan and myself.

The integuments being removed, fæculent matter of a natural colour and pultaceous consistence was found in the cavity of the abdomen, to the quantity of a pound and a half.

All which at first appeared of the hypogastrium and hypochondria was occupied, by what, on a transient view, seemed to be the stomach, but which was found to be a portion of the colon, twelve or thirteen inches in length, from its head onwards, lying transversely in nearly the usual direction of the arch, but more forward, and five or six inches in diameter. It contained chiefly wind, and some fæces, of a somewhat solid consistency, the progress of both of which was interrupted by no mechanical obstruction in the adjacent part of the colon. This intestine throughout its whole length contained more or less of fæces, and was preternaturally thickened, the villous coat being every where puckered into ridges unusually prominent. The peritonæal coat in numerous parts exhibited marks of inflammation ; and this was more especially the case with the distended portion already mentioned, the villous coat of which was smooth, and also marbled with patches of a florid redness. A similar redness appeared in various other parts of the villous coat. When the colon was traced downwards, a round hole of nearly an inch in diameter was discovered in the fore

part of the sigmoid flexure, about five inches above the commencement of the rectum. This hole was plugged up with fæces, and for half an inch all round it, the intestine was redder and much thinner than elsewhere, but without the least appearance of ulceration or gangrene. The peritonæal coat seemed as if torn, and the villous coat was reflected back over the edges of the hole, as though from retraction of the muscular coat. About four inches lower down, or about the termination of the colon, the cause of the disease sufficiently appeared in a scirrhus, which was externally of a botryoid form, contracted in the middle as if tied round with a string, and nearly two inches in length. It was hard, thick, and apparently made up of a congeries of glands, interposed between the peritonæal and villous coats. The outward surface of these glands was of a dark livid colour, which extended itself more or less into their substance with a variegation of white. The passage through the more contracted part of this scirrhus, which was in length three-quarters of an inch, was such as to admit a common sized rectum bougie, but scarcely the first joint of the little finger; and its villous surface was corrugated, red as from inflammation, and on the lower part slightly ulcerated. The lower part of the scirrhus was distant about six inches and a half from the anus. Small detached glands of a similar appearance were here and there found in the coats of the colon; and in different parts of the same intestine there were several small pouches, formed by the extension of all the coats, without rupture, and con-

taining rounded lumps of hardened fæces of the size of marbles, which, in consequence of the contraction of the mouths of the several pouches, could not be made to pass back into the bowel without considerable force. The peritonæal coat of the jejunum and ileum in various parts exhibited a preternatural degree of vascularity; and in the latter bowel, about nine inches from the caput coli, there was a thickening in the coats, which diminished the cavity so as not to admit of the passage of a probe, except in a circuitous manner. This thickening, like that in the colon, was apparently owing to a mass of enlarged glands, passing through the substance of the muscular and cellular coats, and bounded by the peritonæal and villous. It was hard, and its internal part, when cut, was every where of a dark bluish purple colour, variegated with white in proportion as it approached the villous surface, where there was no admixture of purple. This difference of colour was visible without incision on the peritonæal surface, where there was an appearance of several round, livid purple spots, encircled by white rings.

The stomach and spleen were in the natural state.

The liver was very much compressed by the tumid colon; was of a dark livid colour; and, when cut into, every where poured out a large quantity of black blood.

No inflammatory exsudation was discovered on any part of the peritonæum.

Constipation from enlarged Uterus.—Mrs. N., aged sixty-seven, who had enjoyed good health, except occasional dyspepsia, and had habitually suf-

ferred a free and even lax state of bowels, ceased to menstruate at fifty-two years of age. From that period she became subject to almost constant, though moderate, hæmorrhoidal discharges; but her health continued in other respects good.

Nearly fifteen years after the cessation of the catamenia, in the month of November 1813, Mrs. N. came to Bath; and from that time became affected with a disposition to constipation of her bowels, which often continued from three or four to six or seven days, and which, though it was easily removed by small doses of aperients, she suffered to remain, in consequence of her habitual apprehension of purging, and of the inconveniences which must necessarily have been felt from the use of aperients conflicting, on these several occasions, with the accumulated load of fæces in the alimentary canal. During these attacks of constipation, some degree of swelling was felt in the abdomen, but subsided, or, at least, was no longer noticed, after the bowels had been thoroughly evacuated. No difficulty of making water, or incapacity of restraining its flow, was said to have ever occurred during these fits of fæcal retention.

On the 15th of March, 1813, after two days of a sense of weight in the pelvis, and some numbness of the right thigh, a discharge of blood, supposed similar to that of the catamenia, took place from the vagina, and continued in a moderate degree for a week.

From that time, Mrs. N. began to feel more of habitual swelling of the abdomen; and after six days

passed without a stool, took on the night of the 30th of March, by the direction of Mr. Spry, ten grains of Rhubarb, with a drachm of Tincture of Senna. This dose, not operating, was repeated the next morning, and produced within the twenty-four hours immediately following, twenty-four fæculent stools.

On this day I first saw her. She had vomited up some pure and recent bile, and complained of some acute pain, chiefly occurring in fits either before each motion, or previously to the rolling away of wind from the affected part; after which the pain for a short time ceased. The parts affected in one or both of these ways were the sides of the belly, evidently corresponding with the head and sigmoid flexure of the colon. With her stools she evacuated a great deal of wind, but there was in them nothing but fæces, of which part was more or less watery, and part figured. What I saw thus figured was of a small size; but I learned from Mr. Spry, that Mrs. N., after these fits of constipation, occasionally passed well formed cylinders of fæces of proper dimensions. On examination, the belly was sore on pressure, swelled, hard, tense, without fluctuation, elastic, and, on being struck, giving a sound like a drum. I could not find that there was any thing peculiar as to the retention or evacuation of urine; or that any discharge, whether sanguineous or serous, had ever taken place from the vagina, except that above mentioned. There was a total loss of appetite; and all attempts to take food produced nausea, but not vomiting. The pulse was

96 in a minute, and soft; the skin cool; and the tongue slightly furred, but moist.

From the constant recurrence of the fits of constipation, which, except for the last few months, was totally new to the constitution of Mrs. N., and from the peculiar circumstances of the distention and soreness of the belly, accompanied with frequent feelings of approaching motion, which often terminated in the rumbling back of the intestinal contents from the pained part, I could not help immediately inferring that the passage of the fæces was impeded by some mechanical obstruction. The frequent recurrence of pain about the sigmoid flexure of the colon induced me to refer this obstruction to the rectum. It appeared, however, impossible that there could be scirrhus of that intestine, because, as I have before remarked, the bowels were easily acted upon by small doses of opening medicine, and well formed fæces had occasionally passed. The obstruction must therefore have been owing to some pressure external to the rectum itself; and when I considered that, so far as my observation had gone, casual hæmorrhages from the vagina, at an advanced period of life, after the menses had long ceased, always arose from a diseased state of the uterus, it appeared to me that this organ must be in the present case enlarged, and, by pressure on the rectum, produce all the symptoms. This opinion, therefore, I made known at my first visit to the son and daughter of the patient, preparing them at the same time for a speedily fatal event in conse-

quence of the mischief to the intestinal canal which had already taken place.

With regard to remedies, as none promised any relief except those which opened the bowels, I rather promoted than checked that evacuation ; and although slightly opening medicines were given for two days only, loose motions, from six to fourteen in the twenty-four hours, continued to occur till death.

On the 4th of April, the pulse continued as before ; the tongue was more furred, the belly was increasing in size, the pains recurring much as before, and some cold sweat beginning on the extremities. The night was passed with little rest, and some mental wandering.

On the 5th, all food was exceedingly nauseous to her, and she had frequent acid risings in her mouth, though no vomiting. Her motions were watery, and of a dark grey colour ; and her urine began to pass without the power of retention. Her tongue was less furred than on the preceding day. Her face and hands were clammy and more cold. Her mind was also more wavering, and she forgot that I had visited her the day before. Pulse 112, and weak. Pains somewhat lessened.

The next day the tongue was clean, the fæces as well as the urine were passed consciously, but without the power of controul, and the cold sweat was increased. There was also an evident augmentation of the bulk and tension of the abdomen, in which I could still discover no fluctuation, but merely the tympanitic sound on striking it with my fingers. The patient was altogether easier, but her breath began

to be oppressed, and her voice to falter. Pulse 126, and very weak.

On the 7th, at two in the afternoon, the pulse was 120, and still weaker than before: the respiration 38, and sobbing. The skin was cold, and the countenance and hands livid. She was unable to speak intelligibly, and occasionally wandered, but knew all those about her. About five in the afternoon she very quietly expired.

The body was examined by dissection on the following evening at eight o'clock, by Mr. G. Norman, in the presence of Mr. Spry and myself.

The abdomen was much distended, and on being punctured with the knife, emitted, with continued sound, air of a most offensive odor.

When the internal part of the abdomen was exposed to view, the whole of the peritonæal covering of the parietes, and of all the viscera, except the stomach, was of a purple black colour, as though besmeared with ink. In the cavity was somewhat more than half a pint of a coffee-coloured fluid. The small intestines were of the natural size, but the whole colon and cæcum were enormously distended, and much higher in the abdomen than their just situation. They contained chiefly air, but had also in them a considerable quantity of hardened fæces. The pelvis was filled by the uterus which adhered on one side to the cæcum, and on the other side posteriorly to the rectum, throughout the whole extent of that intestine, which it closely compressed against the sacrum. There was no where any ulceration into the intestines. The vagina, and cervix uteri, were in a

natural state. The uterus being removed for the purpose of examination, a probe was passed into the os uteri, and a section made on the probe through the anterior part of the uterus. The cavity was perfect, but rather larger than natural. Its internal surface was also more vascular, so that blood could be pressed from it, as if death had occurred during menstruation. The texture of the uterus was soft, being partly composed of a substance resembling putrid brain, which was capable of being washed out, leaving behind an irregular cellular mass. The appearance was altogether similar to that of the disease called medullary sarcoma, or fungus hæmatodes. From before backwards the uterus in its greatest diameter was seven inches. The openings from the cavity of the uterus to the fallopian tubes could not be discovered. The right tube, after passing two inches from the uterus, terminated in a round tumor, twice the size of a nutmeg, which, when cut into, had the same appearance as the uterus. The left tube terminated in the same manner at the distance of one inch. The ovaria were somewhat larger than these tumors, of a similar texture, and united to the tumid uterus.

The stomach was free from disease. The texture of the liver was natural; but on the inferior part of the edge of the large lobe there was, imbedded in the substance of the liver, a soft medullary tumor, resembling that of the uterus, and of the size of a nutmeg. In the gall bladder were three large concretions.

All other parts of the abdomen were, in their substance, in a healthy state.

Stoppage in the Bowels.—In Miss S., who died Aug. 13, 1804, on the 6th day, there was no obvious fever for the first three days, the blood being not inflamed, the tongue moist, and the pulse not exceeding 70. There was constant vomiting till the last twenty-four hours, and once only for a moment a little delirium.

True Tympany.—Sept. 17, 1807. Mrs. H., aged about thirty-five, and rather thin, informed me that in consequence of mental agitation she had been subject to occasional swellings of the belly; one attack of which, occurring about a month after lying in five years ago, went to a considerable extent, and was treated as a dropsy by mercurial frictions, to which it gave way.

During health, her bowels are generally open every day, and her appetite is good. She menstruates regularly. For about five weeks past, from certain untoward events, her spirits have been greatly depressed; her appetite has declined; and she has been disposed to costiveness, great flatulency, and stitches in her belly. For about a fortnight past, that part has begun to increase in size, and at this time is so enlarged, that she looks like a woman in the last week of pregnancy. She is at times sick; has had no motion for these two days, and has a great deal of pain about the navel. Her belly is every where equally swelled; is tense, hard, elastic, and sonorous like a drum; slightly painful on pressure; and free from fluctuation, or any apparent thickening of the integuments. There is nowhere any œdema.

No appetite. Pulse natural. Skin cool. Tongue clean. Urine rather defective in quantity, and high coloured, but not turbid.

℞ Calomelanos gr. iv. Ft. Pulvis statim sumendus.

℞ Infusi Sennæ simplicis 3x.

Mannæ.

Pulpæ Tamarindorum āā ʒij. Tere simul ut solvatur Manna, et liquori expresso adde

Tincturæ Sennæ ʒiss ut ft. Haustus, trihorio à pulvere supra præscripto sumendus, et 3tiâ. quâque horâ repetendus, donec alvus bis terve fuerit ducta.

Much of these medicines having been vomited up, without any effect on the bowels, except, perhaps, to produce considerable griping, the following remedies were ordered the same afternoon.

℞ Aloës Socotorinæ ʒj.

Vitelli ovi quantum satis sit. Contritis adde

Aquæ pluviae ferventis lb. j.

Salis Marini ʒss. ut ft. Enema, statim infundendum.

℞ Magnesiae Sulphatis ʒijss.

Mannæ ʒij.

Infusi Rosæ 3x.

Acidi Sulphurici diluti gutt. vi. Ft. Haustus tertiâ quâque horâ sumendus, donec alvus bis terve dejecerit.

Sept. 18. The glyster produced one slight watery motion, with a continuance of griping. Three of the draughts were taken without effect, and were for the most part thrown up by vomiting. She has had

little sleep. Her belly is evidently increased in size. Last night she had some appearance of her menses, a week before the usual time ; and they are more copious this morning ; for which reason she refuses to take any more medicines.

Sept. 19. She passed a very bad night from pain and jactation, has had no motion, and her belly still becomes larger. She continues to menstruate copiously. Her pulse is growing quicker, and her tongue begins to be white.

Two drachms of Sulphat of Soda, dissolved in water, are to be given every three or four hours till they operate.

Sept. 20. She has had one very small watery motion, and occasional sickness. No sleep. All symptoms increasing. Menstruation continues.

R Calomelanos gr. i.

Pulveris Scammonii compos. gr. vii.

Opium purificati gr. $\frac{1}{4}$.

Syrupi q. s. sit. Ft. Pilulæ duæ statim sumendæ.

Persistat in usu Sulphatis Sodæ.

Sept. 21. A great deal of pain, and no sleep. She has frequently vomited the medicines, but has had two watery stools. Belly increasing in size and hardness. Menses continue.—Infundatur statim Enema ex Aloë ut antea præscriptum.

R Misturæ Camphoræ ʒix.

Syrupi Papaveris albi ʒj.

Tincturæ Opium gutt. xx. Ft. Haustus, si perstiterit dolor sumendus.

Sept. 22. She had two or three hours sleep from

the draught, but has ever since been restless and in extreme pain about and below the navel, down to the pubes. The glyster given this morning produced one small stool. Her belly is very hard, elastic, sonorous when struck, and with some faint feeling of fluctuation. A great deal of wind is continually rolling backwards and forwards in the bowels, without passing. Menses diminished. She is extremely weak and languid. Pulse 108. Tongue white. She has made nearly a quart of urine, clear, but high coloured.—*Infundatur statim Enema ex Aloë.*—*Horâ somni sumat Haustum è Tinctura Opii ut heri præscriptum.*

℞ *Hydrargyri Muriatis* gr. viii. *Tere cum.*

Linimenti Saponis ℥ij. *ut ft. Linimentum,*
cujus pauxillum super palmam manus exten-
sum, primo mane et horâ somni toti abdomini
per horæ quadrantem infricetur.

℞ *Pilulæ Hydrargyri.*

Scillæ exsiccatae āā gr. iv. *Ft. Pilulæ iv æquales.*

Sumat unam meridie et horâ somni.

Sept. 23. She had the glyster and took a pill at three in the afternoon, and another at bed-time; since which she has had three watery motions, accompanied with an immense discharge of flatus. Her belly is exceedingly reduced in size, and quite free from pain, though a little sore. Urine as yesterday. Pulse 84. *Persistat in usu Pilularum et Haustus nocturni.*

Sept. 24. She eat some food yesterday with an appetite, slept well, and has had three copious, slimy, dark coloured stools, much more fæculent than any

before. Pulse 84, and soft. Belly in a perfectly natural state.—*Pergat sumere Pilulas et Haustum nocturnum.*

Sept. 25. She has had three dark coloured, copious, and more consistent stools. Urine as before. Tongue clean. Sleep and appetite good. Belly free from swelling, tension, pain, or soreness. Pulse 80, and soft.—The remedies were continued for a short time longer; and the patient appeared altogether free from complaint.

Abdominal Inflammation.—Mr. de K., aged thirteen, had long been affected with tension, swelling, and soreness of the abdomen; diminution of appetite; emaciation; deficiency of urine, which was high coloured and clouded; and a pulse of from 108 to 116 in a minute. At the commencement of the malady there had been cough, which, however, had now left him. As the disorder advanced, there was a purging of small stools mixed with mucus, slight anasarca swellings of his legs, and some fluctuation in the abdomen.

I gave it as my opinion that there was inflammation in the abdomen, chiefly, perhaps, of the mesenteric glands, and recommended blood-letting, small doses of Castor Oil, and Squills.

The blood was much inflamed. No relief, however, having been obtained, other advice was had; and I ceased to attend for some weeks, when he died.

The body was examined by Mr. Grant, in my presence.

The lungs adhered very firmly to the pleura; but

there was no existing inflammation ; they were in every respect sound. About four ounces of fluid were in the pericardium.

In the abdomen, the parietal portion of the peritonæum in many places firmly adhered to the parts with which it came in contact, whether liver or intestines, as did the lower side of the liver to the stomach. The liver was considerably enlarged, but loose in texture. The kidneys were also of nearly twice their natural size, but exhibited no other marks of disease. On the fore part of the colon there were several small excrescences, most of which were yellowish, but one of a blackish red colour. They appeared to be diseased glands. A great number of the glands in the mesentery and mesocolon were much enlarged and indurated, as were also those of the lumbar plexus ; and from most of these, when pressed, there oozed out a substance in colour and consistence resembling curd.

There was no fluid in the abdomen.

Effect of Peritonæal Inflammation.—A woman after delivery had the common symptoms of peritonæal inflammation. In a few days suppuration took place in one or more parts of the integuments of the abdomen, through which, just above the groin, a whitish fluid continually oozed. This woman had about her elbows that appearance of eruption, in large patches, as if the skin had been burnt with a hot iron, which is mentioned by Dr. Denman as furnishing a fatal prognosis in puerperal fevers. She died.

Fatal Disease of Ileum, without any characteristic marks.—Miss N., aged four months, enjoyed good health during eight weeks that she sucked her mother, who, in consequence of a deficiency of milk, weaned her about the latter end of September, 1811. After this time she was fed with cow's milk, mixed either with barley gruel, or with a solution of arrow-root. Under this treatment she seemed to thrive, and enjoy good health and spirits, till the 13th of November, when there were appearances of slight excoriation about the labia and perinæum; and she had some greenish and curdled stools. The excoriated parts were washed with rose-water, and cold-cream was afterwards applied. On the following day, the excoriation increased; and the child seemed to suffer pain in the bowels, though without fever. At night an injection was employed of lukewarm water; and three grains of Rhubarb, and four of Magnesia, were given. She slept well; and had some stools of a healthy appearance. The next day she appeared to be well, and in good spirits; but towards night began to be restless. On the 16th, she shewed no signs of pain or griping; but had green stools, began to look dull, and did not like to be out of the nurse's arms. At night she was feverish. On the 17th, half a grain of Ipecacuanha was twice given. The second dose produced vomiting. On the 18th, when I first saw her, she was restless, and had a very dry and parched tongue; but was cool, and her pulse scarcely, if at all, quicker than is natural at her age. There was no tension, swelling, or heat of the belly. Her

stools were somewhat curdled, and slightly green. Ipecacuanha was given in small doses, and glysters of warm water were injected. Previously to these glysters she seemed in considerable pain, but immediately afterwards became more calm. The stools from the injections were of the colour before described. During the night she was very restless, and would not remain in bed, but had occasionally a little sleep in the nurse's lap.

Through the whole of the 19th, the symptoms continued much as before. The injections produced copious stools of the same colour, but more substantial. She began to refuse sucking out of a bottle, to which she had been accustomed, but readily took out of a spoon milk with grated sea-biscuit.—The injections were repeated; Rhubarb was given; and she was bathed in tepid water.

On the 20th, the restlessness and dryness of the tongue continued. She dozed occasionally, with her eyes half open. There was no preternatural fulness or hardness of her belly; and the general heat of her body was below the just standard. Her pulse remained as before. Her motions were copious, without mucus, no longer green, and very much of the usual appearance in infants so fed. A wet nurse was tried, but the child would not suck.

On the 21st, the motions were as on the preceding day, without the smallest discolouration; but the coldness of the extremities and face were considerably increased; the skin was become somewhat livid;

and the pulse much weaker. She was again put in a warm bath ; and cordials were administered.

About four o'clock in the morning of the 22d, after some oppression of breathing, she expired without a struggle.

Even to the last, there was no alvine discharge of a darker colour than is usual with healthy infants.

Dissection.—The dura mater strongly adhered to the cranium. The pia mater was all over much injected with florid blood, but more especially on the posterior part. In the brain there was a wavy intermixture of cineritious and medullary substance, which were scarcely, however, distinguishable from each other in colour, except in the anterior lobes ; and in some parts what was external, and is usually cineritious, was of a paler colour than that which was more internal and immediately adjoining. The general hue was faintly livid ; but whenever the brain was sliced, it became of an unusually florid redness, evidently from the predominance of arterial extravasation. The whole brain was softer than in the adult. In the lateral ventricles there was about a drachm of fluid, and the usual quantity on the base of the skull. In the cerebellum, also, the characteristic distinctions of cortex and medulla were almost wanting, so that the arbor vitæ was scarcely perceptible. The olfactory nerves were nearly as large as the optic, but softer and flatter. All the other nerves appeared to bear to each other the proportion usual in the adult.

In the neck, the internal jugular vein, carotid

artery, and par vagum running between them, were extremely large.

The lungs and heart were sound, and the substance of the latter strong. In the left ventricle there was a little fluid blood; in the right, a larger quantity, somewhat grumous, and of a darker colour. No preternatural extravasation existed either in the pericardium or thorax.

The stomach and duodenum were in a healthy state; the latter, in the neighbourhood of the gall bladder, tinged with bile of the natural colour. The jejunum was free from disease, till about its change into ileum. The latter bowel, from its commencement, through at least half its length, was within and without of a dark purple red colour, having no apparent distinction of vessels, but seeming as if suffused with blood throughout its whole substance. There was no inflammatory extravasation on either surface; but through the part thus affected the bowel contained within it a bloody fluid. As the ileum advanced, it became free from these appearances, and its fluid contents seemed to be only tinged with dark coloured bile, altogether free from blood, and such as is usually seen in the adult. The colon and rectum were without disease. The bowels were all much inflated with air.—The liver, spleen, kidneys, and pancreas, were in a healthy state.

The bladder contained no urine.

The peritonæum lining the parietes of the abdomen was free from inflammation; and in the abdomen itself there was no undue proportion of fluid.

Fever probably from vascular Fulness of Bowels.
—Mrs. W., aged forty, a married lady, mother of several children, living in a rather damp situation, was on the 21st of September 1808, without any assignable cause, attacked with coldness, fever, and violent headach, unattended with sickness. On the 23d, when I saw her, her head had been somewhat relieved by an emetic taken the evening before, and by a purgative in the morning which had procured three stools. But she had had no sleep, was altogether void of appetite, had an aching pain about her neck and thighs, a feeling of what she called confusion in the brain, great heat and thirst, a longing for cool air and cool drink, and a slightly discoloured but moist tongue. There was no distention of her bowels, but a sensation of dragging and considerable uneasiness in them, when she turned on her right side. Pulse 116, and full. She was lying in bed, and sweating.

I ordered that the sweating should be immediately checked by taking her out of bed, and by cool air and liquids; and that she should take, at four and eight in the evening, an effervescing draught with three grains of fresh Squill and twenty-five of Carbonate of Potash, which should be repeated the next day at twelve at noon. Three grains of Submuriate of Quicksilver were to be given at night, and on the following morning a dose of Infusion and Tincture of Senna, with Sulphate of Magnesia.

Sept. 24, two P. M. She was twice or thrice disturbed in the night by the Submuriate of Quick-

silver, and had in the whole ten stools, considerably fæculent, all with much dark bile, and three or four of the last watery, but equal, and free from mucus. During the night she had some sleep between her motions. The pains in her limbs were gone, her head was nearly well, and she could lie on either side without inconvenience to her bowels. Pulse 92, and soft. Skin cool. Tongue moist, but slightly furred. She was lying on the bed with her clothes on, and was desirous of taking food.

As she was now convalescent, and at some distance from Bath, I visited her no more; but I know that she became well in a few days.

Obscure Disease of Alimentary Canal, producing irregular Action of the Heart. — Mr. S., aged seventy-six, who for many years had been subject to violent fits of the most inflammatory gout, alternating with the usual symptoms of dyspepsia, in consequence of which he was obliged to make animal food form a part of every meal, ceased to have any considerable returns of gout, subsequently to a more severe fit than ordinary, which occurred early in the year 1800. The dyspeptic tendency continuing, he was obliged to forego all acid and flatulent food, to substitute a small quantity of brandy and water for wine, and uniformly to take at his meals a quantity of food which was very small, both in itself, and in proportion to his appetite.

By these means the dyspepsia was kept under, but by no means removed. His bowels were very irregular; so that he was almost constantly obliged to

have recourse either to rhubarb or emollient glysters; notwithstanding which, spontaneous purgings would frequently occur, especially after unusual costiveness, and would last from one day to four or even more. They were usually preceded by little uneasiness in any part of the intestinal tube, exhibited no irregularity as to the secretion of bile, but occasionally contained mucus, rarely and in a very slight degree tinged with blood.

Under this state of symptoms, the tongue was always clean and moist, and the pulse perfectly regular, beating on an average 52 in a minute.

Thus the patient's health continued till the winter, spring, and summer of 1812; when the feelings of dyspepsia diminished; and the bowels, far from being disposed to purging; never acted at all without the rhubarb or glysters, and then for the most part inadequately. Now another symptom occurred. The pulse was almost always intermittent, or otherwise irregular, without producing any inconvenience, or interruption of any other function.

In the beginning of July, the bowels began to act more copiously from the usual aperients than they had before done. Immediately the pulse became again regular, and so continued for three weeks, at the end of which time Mr. S. left Bath.

Salutary Effects of Purging in Intestinal Hæmorrhage.—The beneficial effect of gentle but constant purging in such disorders seems, as far as my observation goes, to take place under very various circum-

stances of duration of the disease, and constitution of the patient.

A young woman of full habit, after great pain in the bowels, accompanied with acute fever, was seized with a sudden and violent discharge of blood from the bowels, of a florid colour. She was freely purged by *Oleum Ricini*, and all the stools after the first were free from blood. Several hours having now elapsed without any stool, the hæmorrhage returned, and was relieved by the same process. In order to prevent a recurrence of the hæmorrhage, a cool emollient glyster was injected every evening, and the *Oleum Ricini* was repeated every morning. By this process the patient was kept in a state of constant laxity for several successive days, and suffered no relapse of the disease.

Mr. T., grocer, aged about forty, had for many months gradually wasted away under a small but constant discharge of blood of dark colour, occasionally mixed with what was either mucus or purulent matter, sometimes without fæces, but more usually with them. He was altogether free from piles, and his fæces were of various degrees of consistency, but so far as I recollect, never lax. Great numbers of remedies had been ineffectually tried by his apothecary and myself, before I began to give him a gentle aperient every day, and a cool glyster at night. This plan soon produced an improvement. The discharge disappeared. The patient long persevered, and now, three years after, is fat and in good health.

The late Lord A., many years ago commander in

chief of our army in North-America, at upwards of eighty years of age put himself under my care for the following complaints. He had for several weeks laboured under an alvine discharge of blood of various colours, which occurred frequently in the day, was sometimes accompanied with small scybala, and at other times only with mucus. Lord A. had no tenesmus or piles, and little griping; but he was feverish, had nearly lost his appetite, had the sallow semitransparent hue of skin which usually attends long hæmorrhages; was so reduced in strength as to be obliged to keep his bed; and, in the night, was occasionally delirious. It was obvious that the only chance of affording relief in this case was to stop the hæmorrhage. But how was this to be effected? Every species of tonic and astringent had been, before his journey to Bath, tried in vain. A due examination of the phenomena suggested the remedy. I constantly observed, that if either by chance or design a loose stool occurred, then there was no bleeding. I therefore told Lady A., that if Lord A. was to be cured at all, it must be by purging. She urged his excessive weakness, but yielded to the facts which I pointed out to her. Precipitated Sulphur and Sulphate of Potash were therefore given in small doses often through the day, so as to produce frequent lax motions. The discharge of blood almost immediately ceased. Lord A. regained his appetite and strength so quickly, that, at the end of a fortnight, he was able to ride out on horseback, and shortly after returned without any relapse to London, living a year or more afterwards.

Cure of Hæmorrhages from the Bowels, with or without Diarrhœa, by purgatives and glysters, assisted by temperate diet.—Several cases of this kind have occurred to me. In Mr. T. and Mr. A. C. such symptoms were of from one to two years duration; in the former always with previous griping, and occasional variation in the consistency of the stools, but almost always with more or less of mucus or blood, which was not florid; in the latter, constant diarrhœa, without griping, with occasional blood and mucus, following a West-India fever. In neither was there any evident piles, or fever; and the appetite was good. Mr. T. was extremely reduced in flesh. I ordered him a vast variety of remedies with little benefit, and at last had recourse to glysters of cold water; after the very first of which the hæmorrhage and other symptoms of disease ceased, and never hitherto (nearly a year after) returned. The glysters were occasionally repeated, and aperients continued as they had before been. He was always temperate in every respect.

Bowel Complaints.—A physician, of fair complexion, large, fat, and of a full habit, at twenty-two became extremely dyspeptic; and as every thing of an acescent kind became intolerable to his stomach or colon, was obliged to leave off fermented liquors, and confine himself chiefly to a diet of animal food, with the occasional use of aperients. At thirty-six, having spit some blood, and as many of his maternal relations had died consumptive, it was thought prudent that he should leave off this diet, except

fish, and live on ass's milk, and vegetables, chiefly of the farinaceous kind. This change was followed by a burning heat in his breast, accompanied with fever, frequent cough, with expectoration thin and yellow. A pulse in the evening of 120 to 130, the fever usually ending at night in a copious sweat, after which he slept tolerably well. As the pain and heat in his breast suffered considerable alleviation from eructations of wind, which was more than usually oppressive to him, and which seemed to him to occasion the cough itself and the expectoration which accompanied it, he quitted the ass's milk, returned to his diet of animal food, and took a very weak infusion of Bark and Cascarilla in lime-water. Within forty-eight hours, the heat and pain in his chest began to abate, and with them the cough and fever; and, in a week he was perfectly free from all complaints, except the dyspepsia, which he had so long occasionally suffered.

Two or three months afterwards, on the 3d of June, he went nearly thirty miles in order to visit a sick friend, at whose house he eat about half a dozen strawberries, with a table spoonful of cream, and drank half a wine glass of old Styre cider. The weather being very warm, he had thrown off, during the day, a flannel waistcoat, which he had been accustomed, during winter, to wear next his skin, but which he constantly put on again when he went to bed. The waistcoat not having been packed up with his other articles of dress, after lying down, he became unusually cold; and after going to sleep was

waked by some pain in his bowels, which was followed by a purging stool. Early in the morning, while he was in his carriage on the road homeward, there fell a violent storm of hail, and the weather became extremely cold; so that at breakfast he felt himself much benumbed and shivering. He eat his breakfast, however, with an appetite, and reached his home in the forenoon. In the course of the day some febrile heat with pain in his head came on, accompanied with uneasiness in his bowels, and followed by loss of sleep at night.

In this way he went on, somewhat better in the morning, but with pain in his head, constant uneasy feeling in his bowels, disposition to costiveness, total loss of appetite, great lassitude, increasing fever, lateritious sediment in his urine, and restless nights, till the afternoon of the fourth or fifth day, when a physician from the country called on him, in order to induce him to visit a patient at the distance of twenty-four or twenty-five miles from his residence. With great reluctance he left his bed and went, though so weak, and with such aggravation of the pain in his bowels from the motion of the carriage, that at each place where he stopped, he was obliged to throw himself across some chairs, in order to prevent fainting. On the following day he returned, worn out with fatigue, and with every symptom greatly aggravated. From this time he was confined to his room.

The symptoms were now as follows : Some slight soreness on pressure about the seat of the arch of the colon, though no considerable tension; a sense of uneasiness there rather than acute pain, and a con-

stant heat from somewhat above the navel through to the back, which every day about three o'clock in the afternoon increased to an intolerable burning, ascending up into his throat, mouth, and nose, as if they had been covered with Cayenne pepper, and not declining till five or six o'clock in the morning, when for four or five hours there was a slight alleviation of suffering. To these symptoms were added a dry tongue, incessant thirst, an utter aversion to food, occasional nausea, which seldom amounted to vomiting except after he had tried to eat bread or other solids, constant jactation, a sense of weight and pain on the top of the head, great acuteness of perception, and a rapid transition of uncontrollable thoughts and visions, not amounting to actual delirium, but which continually presented themselves, and utterly precluded sleep. Sometimes as soon as the eyes were closed, and he received some abstraction from thought, a parcel of squares or triangles seemed dancing before him. Afterwards faces and figures of every fantastical or horrid shape were surrounding and designedly irritating him. Then a finger or some sharp instrument was pointed at him, and with sudden bounds approached nearer and nearer, till he started suddenly out of his trance, lest the next thrust should penetrate and transfix his eye. So passed the tedious days and weeks, in hopeless agony.

The bowels were somewhat difficultly moved, but were kept regularly and freely open. Costiveness seemed to aggravate the sufferings, but gentle laxity of bowels did not appear to afford them much relief.

The pulse, according to the different periods of the day, was from 84 to 98 in a minute ; and some sweating continued to follow the night paroxysm of fever. All acids, vegetable infusions, and saline medicines greatly disagreed with him, producing acidity, flatulency, and consequent increase of his sufferings. Water, rennet whey, and clear mutton broth, chiefly cold were his only ingesta.

The patient's strength and flesh were now every day failing, without any alleviation of his complaints, notwithstanding the efforts of two eminent physicians.

At length he proposed that some leeches should be placed on that part of the back or loins from which the burning heat seemed to proceed ; and that a blister should be applied to the abdomen. Twelve leeches were in consequence employed, and drew extremely well ; but so weakened him, that he could not raise his head from the pillow without fainting. The blister, which was, by his desire, at least ten inches in length, and six in breadth, and reached from the spine of one os ileum to that of the other, also acted very powerfully.

Under these circumstances the patient, almost for the first time, fell asleep at midnight ; but at three in the morning awoke with a feeling as if the hand of death was on him. His lower extremities and stomach were cold and almost insensible ; his head was bathed in a cold sweat ; and his pulse was 132 in a minute, weak, and irregular. His reason, however, being perfectly clear and undisturbed, he called to a faithful nurse who attended him, and observing to her that

“ he believed he was going to die, but that he would “ not die without a struggle,” desired that she would give him some peppermint water, which he swallowed without the least effect, as he afterwards did rum and water, and then pure rum. Neither of these stimulants produced in his stomach the least sensation. Recollecting, however, that he had some gin of the strongest kind, he drank a whole glass of that liquor, and half another ; and then began to experience some feeling in the stomach, which soon amounted to a violent pain like a cramp. This, however, was a state of felicity comparatively with the former, for it was attended with some sensations of returning life. His feet became warm ; the pulse fell to its natural state ; and a sweat broke out all over him so copiously as almost to wet through the bed. By degrees it went off ; and though for many preceding days he had been so weak, as not to be able to sit up without support, he was now so much better, as that afternoon to walk down stairs without assistance.

Now there can be little doubt that this patient, throughout what has been related of his constitution, laboured under successive irregular determinations. The intestinal canal was habitually liable to that state. In the last attack, the determination to the intestines was increased, first by the improper ingesta, and next probably by cold applied to the skin, which was followed by increased action of the heart, still determining the blood to the vessels of the intestinal canal. This determination was removed by the bleeding and

blistering, and the general balance of circulation afterwards restored by the ardent spirits.

The same patient several years afterwards had an attack of a similar but slighter kind from eating, for several successive days, salad with vinegar, after having disused that food for many years. Since that period, he has experienced two attacks of lumbago, and several of gout in the extremities, of which one was violent and of considerable duration. The dyspeptic symptoms continue much in the same state as they have for many years been.

While this patient was so affected, many persons in the same place were seized with a similar complaint, of which several, as this gentleman's own gardener, and also one of his man-servants, died.

Affections of the Aorta descendens, or those branches of it which supply the Alimentary Canal, a proof of Dyspeptic Determination.—Several cases have occurred to me of patients who have had constant quick, or rather palpitating, pulse, with inappetency, and sometimes sickness; in whom there has been such a throbbing about that part of the aorta which runs at right angles to the arch of the colon, that, on pressure on that part many years ago, I could not help deciding that the complaint was actual aneurysm of the aorta. In the illness which I have described in the preceding pages, I had that beating there most sensibly to be felt by the touch, with some uneasiness on pressing it then and many times since; and in the case of Miss M. in Brock-street, some weeks ago, about June or July 1807, the same thing

happened, so as to give Dr. W. the same notion that there was dilatation of the aorta. I told him that I thought otherwise; and that the patient, who had been ill some years, and under the care of various physicians, might be cured, or at least greatly relieved, by bleeding and purging. Her ingesta were certainly not great; notwithstanding which, from the use of aperients every day for many weeks together, the quantity of substantial stercoraceous matter continually passed was astonishing. Her blood was also in an inflamed state; and these measures restored her to much more comfortable health.

Now I believe that in all these cases there is an undue determination or temporary dilatation of the aorta itself, of the superior and inferior mesenteric arteries which supply the colon, or, perhaps, chiefly the superior mesenteric artery itself, the trunk of which may be sufficiently distended to give the feel of throbbing above described. All the intestinal branches of this artery partaking of the dilatation produce a spasmodic state of the muscular fibres, and a preternatural secretion into the cavity of the colon, thus accounting for the morbid feelings in that part, and in the whole system, and the immense long continued evacuations, which are infinitely disproportioned to the quantity of ingesta, and without which in various complaints called bilious, as Mr. C., Mr. R., Dr. B., Mrs. S., &c. &c. the disease is rarely removed. (1807.)

Good Effects of Purging in Bowel Fever.—A young Lady, aged twenty-six, who had been occa-

sionally affected with dyspepsia, three days after having taken a long journey in an open carriage in very cold weather, was, on the 13th of September, 1807, seized with headach and shivering, succeeded by loss of appetite and fever, but neither sickness, nor pain or soreness in the bowels, either with or without pressure. After the use of Calomel and a few purgatives, she became nearly free from complaint at the end of a week ; when, fancying herself to be weakened by the remedies, she refused to repeat them. Her pulse was now nearly in the natural state, with great disposition to faintness, and more or less of spontaneous purging, without blood or mucus. The symptoms increasing, I saw her on the 30th of September. She was then so weak as to be scarcely able to sit up out of bed, yet totally without sleep, and labouring under constant jactation. Though her tongue was tolerably clean, her skin moderately cool and rather moist, and her head free from complaint, she was altogether without appetite ; and her pulse varied from 84 in the day to 96 or 98 at night. She had no sickness ; and not the least tension, swelling, pain, or soreness in the bowels. Every day, however, she had from six to eight stools, which were watery and offensive, but unmixed with mucus or blood ; and had a constant feeling as if she should be relieved by farther evacuation. Three or four nights previously to my visit, the stools had been restrained by twenty drops of Laudanum, immediately on which there ensued tension and uneasiness in the belly, with violent pain in the head, and disposition to delirium ;

but these symptoms subsided on the application of leeches to the temples, and a spontaneous return of the purging.

I ordered the patient Calomel, succeeded by Sulphate of Potash and Rhubarb, which operated briskly, and brought away many stools such as before described. Afterwards an effervescing draught of Carbonate of Potash, with Lemon juice, was given every four or five hours, with a grain of Ipecacuanha; and a glyster of tepid water was administered night and morning. In the course of a few hours, the pulse was diminished in frequency. On the second night she slept seven hours, and the following morning, for the first time, requested to eat solid food. From this time under a continuance of the same plan properly modified, she uniformly recovered.

Probable bad Effects of stopping Purging in Enteritis.—Miss M., aged fifteen years and three quarters, perfectly regular as to menses, was, in November, 1807, seized with a pain and stoppage in her bowels, accompanied with fever, all of which, after some days, yielded to repeated purgatives, which in thirty-six hours operated from twenty to thirty times. By this evacuation she thought herself so much weakened, that she desired to have some medicine in order to restrain it. Accordingly a pretty strong opiate was administered. The purging stopped; but within a few hours afterwards she became affected with great swelling, tension, and soreness of the abdomen; constant sickness, and violent strainings to vomit, in which she brought up fluid of a dark brown

colour ; accompanied with coldness and lividness of the face and extremities, and copious sweating. Two days after these new occurrences I saw her, with a tolerably clean tongue, and an extremely weak pulse of nearly 130 in a minute. The swelling was uniform over the whole belly, and appeared to me fully equal to that of a woman about to lie in. With great difficulty, I once more opened her bowels ; so that, during four or five days of my attendance, she had nearly one hundred stools, all fæculent and well digested, though watery. In consequence of these evacuations, the sickness disappeared, and the swelling, tension, and soreness of her belly were greatly abated, so as to enable her to lie on her sides, and to breathe to greater depth, and proportionably less quickly. Her appetite also began to return ; her extremities became more warm ; and her pulse came down to about 100 in a minute, and regained much more of fulness and strength.

Notwithstanding these flattering appearances, on the 20th at noon there was a return of some dark-coloured vomiting, which increased all through that night ; and about eleven or twelve o'clock the next day, she died without a struggle.

Surely these cases were of a most instructive kind. The vascular system of the alimentary canal was overcharged with blood, which, when purging, whether natural or artificial, occurred, was moderated through the proper channel of evacuation from the neighbouring excretories ; though, in the former case, just sufficient naturally to keep the disease within bounds,

though not to cure it. But when, in both cases, it was stopped by opiates, the vascular accumulation increased to a dangerous degree, so as in the first case to produce tension, swelling, pain, and other symptoms; and in Miss M. actual black or sanguineous extravasation, and death.

So in Miss W., who had twice black stools and vomiting with great faintness, and cold extremities, and habitual dyspepsia with irregular bowels, on a subsequent occasion there was sickness with costiveness for a considerable time, which sickness went off from a spontaneous purging during some weeks. These were all different degrees of the same vascular fulness in some part, or different parts, of the alimentary canal.

In both the cases last mentioned, the fevers were of long duration. The head was considerably affected; and the symptoms were such as would have induced physicians to arrange the two among disorders of a typhoid kind. Yet in both the alimentary canal seemed the chief seat of the disorder; so that it may be justly suspected whether the same morbid affection of the mucous membrane, which constituted the leading symptom of disease in them, may not be that which chiefly designates typhus in all other cases. This subject will meet with further discussion, when we come to inquire into the particular pathology of various febrile affections.

Since, however, this state of the mucous membrane of the intestinal canal in fevers is accompanied with much distention from flatus, so as to cause the abdomen to swell, and give a drum-like sound when

struck, it becomes highly probable a priori that the *tympany* itself, of which I have seen only one idiopathic case, arises from a similar cause. This explanation is sufficiently conformable to the rapid accession and termination of the disease, and its disappearance without much discharge in the case which I witnessed; since spasmodic asthma, which I have found to originate in the same cause, often attacks, and ceases in a precisely similar manner.

Necessity of repeated Purging in Enteritis.—Thus in Mrs. L., five or six very copious stools, of which the last, at seven in the morning, was merely water of a slightly fæculent tinge, accompanied with ragged mucus, relieved the aching pain and tightness of the belly, enabled her to lie on either side and make a full inspiration, removed the extreme dryness of her tongue, reduced her pulse nearly to the natural state, and restored the natural feelings of comfort; notwithstanding which, purgative medicines being omitted, and the bowels not again opened till nine in the evening, all the symptoms of eructation, dryness of tongue, quickness of pulse, intense thirst, pain, soreness and incapacity of moving without agony, returned; but were again considerably alleviated by a loose and slightly fæculent stool, in quantity not exceeding three ounces. In the course of that night and the following day, the symptoms of disease were nearly removed by ten or twelve other evacuations, which were more copious and fæculent, notwithstanding the whole ingesta, during the preceding twenty-four or

thirty hours, were twelve ounces of cocoa, three small cups of tea, and a mouthful of bun.

Of this kind a remarkable instance occurred in the case of Mrs. F., a lady of about seventy years of age, who had for several days been affected with uneasiness in the bowels, accompanied with some diminution of appetite and slight fever. A dose of Castor Oil had operated rather briskly on her bowels, producing some degree of relief. On the following day some compound powder of Scammony was given as a substitute for the oil, which she had nauseated. This occasioned an inefficient motion, followed immediately by a sense of stricture above the navel, conjoined with vomiting, pain, and coldness, and a great degree of faintness. These symptoms were only a prelude to general peritonæal inflammation with its usual concomitants, eructation and sickness, great pain and soreness all over the belly and back, especially in the erect posture and during inspiration, dryness of the tongue, heat of the skin, and quickness of pulse. The bowels, which had been before easily moved, now became so costive, that eight or ten successive doses of strong aperient medicines, though not rejected by vomiting, produced no effect. At length the bowels were moved; but it was not till eight or ten motions had been procured for as many successive days, that all the symptoms of disease were fully overcome.

This is a clear example of constitutional affection, produced by the inefficient operation of a remedy for one which was almost wholly local.

Mrs. F., after evident enteritis, accompanied with

the usual symptoms of stoppage, pain, soreness, and fever, was at length relieved by repeated doses of purgatives, which, though they produced copious evacuations, exhibiting bile of different shades, and always in large quantity, caused no discharge whatever of mucus. In this state she went on, with bowels constantly and freely opened, for several weeks; but never regained any appetite; had occasional sickness, much flatulency, flying pains about the abdomen, rather a dry though not furred tongue, restless nights, slight preternatural acceleration of the pulse, considerable diminution of strength and spirits, but no heat on the skin, affection of the head, difficulty of lying on either side, or taking a deep inspiration. At length, on the 28th of September, she had more than usual of the stitches in her bowels, with soreness on pressure. Two grains of Aloës now produced, for the first time, a great number of mucous stools, bilious as usual; and one grain and a half of Aloës, with one of James's Powder, produced a similar effect. Calomel and various other purgatives were given, which, though they operated briskly on the bowels, always occasioned sickness, and totally incapacitated her from taking food. The motions which were thus produced were accompanied with a great deal of mucus, and occasionally with streaks of blood; and these stools occurred alike, if medicines were wholly intermitted, with this difference, that they were not so free, and the patient had much more of distention, pain, soreness, and feverishness. At length glysters of Castor Oil were now substituted for every other

internal medicine, and were continued once a day for several weeks, producing in the twenty-four hours from four to twelve stools; of which several were always more or less mucous, and differently intermixed with bile, which, however, was never defective. Once in ten days or a fortnight Calomel was given; and then the bile excreted was usually of a dark colour. Under this plan the strength improved, and about the latter end of October the appetite began to return, and continued increasing.

Case.—Miss M. W. from infancy had some internal affection, and her bowels never performed their functions regularly. She became worse after a fall from a horse in December 1803. March 14th, 1807, she was seized in London with a violent internal complaint, which Dr. Baillie called a bilious fever: the strongest medicines were used to force a passage through the bowels. In three or four weeks the disease in some degree abated; but it returned again, when Dr. Clarke was consulted, and he sent her to Cheltenham the 28th of April 1807. The motion of the carriage increased the internal pain so much, that she was four days on the road. From the first seizure on the 14th of March to the time of her death, every exertion brought on increased pain. The first month she was at Cheltenham she tried warm bathing every other day, but never was able to drink the waters. She continued suffering the same internal pain, particularly on taking food, and was obliged to have constant recourse to medicine. On the 29th of May she had another attack, with a strong fever, and lost the use

of her right side from the hip downwards. On that day she took to her bed, and remained principally in it till August, and then became totally confined to it. In July, Mercury was rubbed in, which did not produce a salivation till the beginning of September. It remained at its full height six or seven weeks, during which time two or three quarts of saliva flowed from her mouth in four and twenty hours. The spitting continued six or eight months, and returned at intervals almost to the last. During the salivation she required much less opening medicine; and in the seven weeks it was at its height, she lived entirely on claret, drinking about two bottles a day. Her evacuations were then most profuse, often amounting to twelve, fourteen, or more, in the twenty-four hours, and in quantity to perhaps three gallons, and even more. While at Cheltenham she continued taking the greatest variety of medicine, the time of salivation excepted, her bowels getting no relief but from strong pills. From the 29th of May she could never use the limb affected, nor lie in a straight position, without feeling pain in the stomach: and even without motion, she scarcely ever ceased complaining of internal pain.

While at Cheltenham she had violent spasms, which occasioned the most frightful distortions, and she was afterwards constantly affected by them, internally or externally, to the time of her death. On the 17th of November, 1807, she was brought home in a bed-carriage, appearing to suffer the greatest agony all the way. Soon after her return, bleeding was tried.

About twenty-four hours after the bleeding, the bowels, which had refused to yield to medicine, gave way, and spitting generally followed, often profusely. But nearly the same number of pills was taken, and the bleeding was continued nearly once a week, from the beginning of December 1807, to the time of her death. During part of the time she was at home, the latter end of the summer of 1808, she would occasionally employ herself, and seem to forget her pain. But in the last twelve or fifteen months she had given up every employment which seemed to beguile her of the thoughts of her disorder, abandoning herself entirely to the expression of her pain. She has often been obliged to take from twenty to thirty pills, three of which would have been sufficient for a person in health, before any effect was produced. No very material alteration in the general symptoms, nor in her appearance, took place, till a few weeks before her death; when she complained of still greater pain in the stomach, which went through to her back: her countenance also sunk in the last ten days, and her features began to assume a corpse-like appearance. She died apparently without pain.

Dissection.—April 12, 1810. Miss W., aged twenty-one, who died on the 11th, about half-past four P. M., without delirium or convulsions, and had desired to be turned only a few minutes before her death, was opened at five P. M. on the 12th.

The upper part of the body and breasts were fat and well formed, but from the upper part of the pelvis downwards there was great shrinking, probably from

her having for nearly three years been constantly lying in bed; and as she lay almost always on the right side, the left hip was somewhat projecting, the spine a little incurvated in that direction, and the right foot somewhat lower down than the other. There was no appearance of disease in the cartilages or bodies of the vertebræ, or in any external part of the thorax or abdomen; but a very slight degree of anasarca was observable about the ankles.

The cellular membrane about the thorax and abdomen was full of fat to three-fourths of an inch, or an inch, in thickness.

In the thorax, the heart, pericardium, and lungs, were in a perfect state; and the cavities contained no more than the usual proportion of fluid.

In the abdomen, the omentum was large, very fat, and towards its inferior part firmly adhered to the peritonæal covering of the parietes of the abdomen nearly as low as the fundus of the bladder. The liver, spleen, pancreas, and kidneys had in every respect the usual appearance. The gall bladder was of about the common size, and full of bile. The stomach was in all its parts free from disease. The intestines were of the natural size and thickness, but throughout the whole of their tract, from the jejunum downwards, the villous coat was much more red and vascular than usual, and was imbued with the same secretion which had been usually evacuated. The cavity of the abdomen was free from water. The ovaria and uterus were in a healthy state, except that on the right side the fimbriæ of the fallopian tube slightly adhered to the ovarium.

The brain was uncommonly vascular. There was a considerable quantity of transparent fluid between the tunica arachnoidæa and the pia mater; and about six drachms in the lateral ventricles. In all other respects the brain, cerebellum, and medulla oblongata, were in the usual state.

There was no disease or disorganization in any part of the spine, its cartilages, or ligaments.

Miss W. had been ill for three years; being at first affected with violent pain on the right side of the abdomen, supposed by Dr. C., of London, to be owing to diseased ovarium. In this state she constantly found herself easy only while lying on her right side, with her right knee almost drawn up to her breast.

White Diarrhæa—occurred in Sir Chas. M., from disorder of the villous coat of the duodenum and jejunum. His pulse, except at last, never exceeded 72, and the average not more than 66 or 68. His countenance and tongue were pale, the skin always cool. He suffered no pain. This complaint began with purging. It is totally different from colic, or inflammation of the colon. Is not the last generally a disease of the peritonæal coat? whereas weaning brash, and the case of Sir C. M., are diseases of the mucous membrane.

Cholera.—Mr. G., aged fifty-six or fifty-seven, a tall stout man, accustomed to play and late hours, and to much bodily exercise, and a temperate liver with regard to liquor, always enjoyed excellent health, and found nothing disagree with his stomach and

bowels, which therefore he very much tried with large quantities of indigestible food, and among the rest, nuts.

Two days before my visit, on the 10th of October, 180—, he was seized with some nausea, and violent purging of watery stools, unattended with pain or griping in the bowels, headach, vertigo, shivering, or fever. His pulse was weak, and slow; and his tongue then clean. Under these symptoms he continued to labour, when I saw him with Dr. W. He had also total inappetency, some thirst, no hardness or soreness about the belly, no eructations. The most distressing symptom was violent cramp from the hams down the calves of his legs to the feet, preceded by a tingling in his feet, and most severe in the right extremity. This cramp was so painful as to make him voluntarily spring suddenly out of bed, immediately after which there came on an increase of the usual nausea, with faintness, coldness, and dampness of the skin, so that in a few seconds he was obliged again to lie down through mere weakness.

In order to mitigate the pain, it was necessary to give him thirty or forty drops of Tincture of Opium. I found also that I was able to lessen the violence of pain during a fit, by forcing up the toes with my hand under the foot, while at the same time, with the other hand, I firmly pressed down the knee, so as to keep the leg strongly extended. By these means the cramp was relieved.

The tongue, however, became dry; there was a constant thirst; and very weak pulse, little quicker

than natural ; no morbid heat of the skin ; a great degree of debility, restlessness, and drowsiness ; and a cessation of alvine evacuations. Nearly thirty hours elapsed before stools could be procured, by Submuriate of Quicksilver and Scammony ; and in the interval he threw up, at one effort, nearly two quarts of a fluid deeply tinged with yellow. As the purgatives began to operate, he had occasional hiccup, and the fæces were extremely pale, as if no bile was excreted. He continued free from pain or soreness of the bowels. The purgatives were continued, and under their use the stools by degrees acquired their natural colour ; the symptoms disappeared, and appetite and strength returned, so that on the 15th of October I discontinued my visits.

In Mrs. B., under a similar attack of purging without pain, the pulse, on the second or third day, was only 40, and the skin cold, though both rose to the natural degree about twenty-four hours afterwards, several days before her death.

In the case of death by Arsenic, recorded by Dr. Yelloly, though the bowels were inflamed, the pulse was only 40 in a minute. In all these cases the constitution appeared unable to act.

Dropsy cured by Opium after Calomel.—A Lady, nearly forty years of age, extremely thin, and long subject to dyspepsia, and very irregular bowels, for which she took ineffectual doses of aperient medicines, had passed some periods without any menstrual discharge ; soon after which she began to have œdematous swelling of the feet and legs, and paucity of urine.

Squills, Digitalis, and various other diuretics, together with purgatives, were given ineffectually. The swelling extended itself upwards ; and, at the end of some weeks, a fluctuation also appeared in the abdomen.

Calomel being now exhibited, the mouth became in some degree sore, and at the same time a great degree of fever came on, accompanied with very painful inflammatory swellings of the wrists, but no change whatever in the hydropic symptoms.

At this time, when, from the extreme weakness and emaciation, all reasonable hope of saving the patient's life had vanished, Laudanum alone was administered, with no other expectation than that of soothing the last hours of a miserable existence. After the very first dose of this medicine, some augmentation took place in the quantity of urine ; and this continued progressively during the daily use of the same remedy, so that, in a few days, every dropsical symptom entirely disappeared ; and now, for many years past, the patient has had no other malady than the dyspepsia and costiveness, to which she had been so long habituated.

Ascites, with Peritonæal Inflammation.—July, 1812. Master U., aged ten, was for several months affected with the following symptoms. A pulse from 112 to 130 in a minute, strong, and hard ; pain, soreness, and irregular swelling, of the belly, which was hard in various parts, especially from the right hypochondrium to the navel, and evidently fluctuating ; considerable heat of the skin ; high coloured and defective urine ; clay coloured stools ; and gradually

increasing emaciation. At the same time his tongue was clean, and rather preternaturally red; his appetite for the most part good; and he was free from thirst. These complaints began with occasional pain and irregularity in his bowels, and were not sufficiently noticed till the period was past when relief was practicable. He was blooded, and blistered on the abdomen; was purged; employed mercury in various ways; used the cold bath; and took the most powerful diuretics. These means in some degree retarded the progress of his complaint, and more especially removed the ascites, and caused the urine to resume its natural appearance and quantity. By degrees, however, the emaciation and debility increasing, he died; the pulse becoming considerably slower for some days previously to the fatal termination.

He was opened the day after by Mr. Cruttwell, in my presence.

The abdomen swollen and tense, and already much discoloured. Emaciation extreme. On reflecting the abdominal muscles, the peritonæum was found thickened and dense; and its internal surface connected, by adhesions more or less firm, to the omentum and the surface of the intestines. With the omentum it was completely consolidated; and the latter production was converted into a loose cheesy substance, which broke on the slightest touch. The liver was closely united, on its convex surface, with the peritonæum lining the abdomen: its structure was firm and even indurated: in thickness it did not exceed an inch; and its colour resembled that of dark venous blood.

The gall bladder was collapsed and quite empty ; but its inner surface was stained of a deep bilious hue. The intestines, and all the abdominal viscera, were glued together by adhesions ; and their structure was so tender, as to preclude any accuracy of examination. The mesentery was converted into a substance similar to that of the omentum ; soft, cheesy, and with its glands in different states of enlargement and consistence. Some were semifluid on being divided, others of a curdy consistence ; and some contained pus towards the centre. At the root of the mesentery, some of the glands were as large as walnuts, and very hard. On making a section of them, their structure was found to be dense, homogeneous, and of a white colour, without any appearance of vessels. In others the exterior surface was of a cineritious colour, and vascular ; while the centre, or medullary part, was perfectly white, and shewed no appearance of vessels. A small quantity of pus was effused at the lower part of the abdomen.

Dropsy with sufficient, or even excessive Urine, probably fatal.—Thomas C., aged fifteen, with rather light hair, skin of a healthy colour, short, and with an immense head, has been ever since his birth subject to cough, with more or less of wheezing. For half a year past he has had occasional swellings, which pit on pressure, in his legs, belly, face, shoulders, neck, and every other part, but his hands and fore-arms. His belly is now all over equally swelled, evidently from fluid within it, which fluctuates on proper impulse. No particular hardness of any part, or pain,

is observed on pressure. He has frequent griping pains in his bowels, and is disposed to purging. He is often affected with pain about the right mamma, but has no soreness there; can take a deep inspiration without cough or other inconvenience; lies down with ease, and equally on both sides; and sleeps well. He is subject to giddiness and pain in his head. His appetite is bad for animal food, and he has occasional vomitings. His tongue is slightly furred, but moist; and he is very thirsty. Urine in the twenty-four hours four pints and a half, very pale, and rather milky. Pulse 88, regular, and rather hard. He is dull, and indisposed to move; and apt to be out of breath on walking; notwithstanding which he has now walked from Midford to my house, a distance of full three miles, and much up hill, and is about to return in the same way.

Oct. 8. Pulse 90, and rather weak. Respiration 27; after walking as before.—Mitt^r Sanguis è Brachio ad ζ iv.

Oct. 9. He was not faint from the bleeding. The serum of the blood is rather milky, and the cruor uncommonly tough and indiffusible. That in the first cup is covered with an opaque and hard crust of coagulated lymph, about as thick again as a half crown, and somewhat cupped. In the second, crust thinner, not cupped, but tough. He is giddy; and now complains that for three or four days past every thing has seemed so dark to him, that he cannot distinguish the forms of objects. The pupils are rather wide, but contract well when the eye is opened after

having been shut. Bowels rather bound. Pulse and respiration as yesterday.

℞ Hydrargyri submuriatis gr. iv.

Scillæ exsiccatae gr. vi.

Confectionis Rosæ Caninae q. s. sit. Ft. Pilulæ
vj æquales. Sumat unam meridie et horâ
somni quotidie.

Oct. 11. The pills have purged him twice or thrice a day. Head less giddy. Sight and other circumstances as before. Pulse 96, and hard.—Pergat.

Oct. 15. He has had three loose stools daily. Complains of pain in his eyes and head. Breath somewhat better than it was. Sight, urine, and swellings, as before.—Omitt^r Pilulæ. Mitt^r Sanguis è Brachio ad 3v.

Oct. 18. On the 15th he had breakfasted at seven, and was blooded at eleven. Of the blood taken, in three teacups, the serum is still milky, but less so than before. The crassamentum is very solid and indiffusible; and on all the cups there is a crust of a coagulated lymph as before, which in the last cup is concave. Contrary to my direction, he has continued the pills, and has had three stools every day. He sleeps well. His head, &c. are much the same; and his eyelids and face now swell of a morning. Urine five pints daily. Pulse 100, and weak.—Omitt^r Pilulæ.

Oct. 22. Urine pale and clear, and four pints and a half per diem. Throat at times slightly sore. Sight, and other circumstances, as before. Pulse 100, and weak.

℞ *Liquoris Ammoniae Acetatis* ℥ijss.

Aquæ Menthæ viridis ℥ijjss.

Tincturæ Digitalis gutt. xxx. M. *Sumat cochlearia* duo *ampla bis die.*

Oct. 29. He continues to have somewhat of soreness in his throat; but no pain in his gums, or mercurial taste. Tongue slightly furred, and grey. Two or three loose motions daily. He has pain round the back part of his head, and some giddiness; and his sight remains as before. Urine four beer pints every day; pale, and rather milky. The swellings are gone from every part of his body but his face, in which there is some degree every morning. Pulse 88, and soft.—*Applicentur temporibus hirudines tres. Pergat in usu Misturæ ter die.*

Nov. 3. The leeches drew well, and the blood flowed almost the whole day. His head, however, is no better, and the pain, which greatly affects him over his eyes, has much disturbed his nights. Bowels open twice or thrice a day. Swelling of the face nearly gone. Urine four pints daily; of the same quality as before. Pulse 96, and soft.—*Pergat in usu Misturæ.*

Nov. 8. For three or four days he has at different times been so giddy as to be scarcely able to stand, and has had headach. The pupils continue dilated, and the sight dull. He has also suffered some increase of shortness of breath, with wheezing; and the swelling of his face has increased. Pulse 108, and full. Respiration 24.—*Mitt' Sanguis è Brachio ad ℥vj.*

Nov. 15.—He has omitted to call on me as desired, and I have not been able to see the blood. For two or three days he has had cough and pain in his left side, on which he cannot lie without difficulty. His breath is very bad, and his cough is accompanied with thick expectoration. He is free from catarrh. His bowels are loose; his side much as before. His face and body are more swelled, and in the latter there is an obscure fluctuation. Urine as before in quantity, and of a higher colour. Pulse 96, and very weak. Respiration 32. Sumat Pilulas Hydrargyri cum Scillâ ut prius præscriptas.

The event of this case I never knew. It was probably fatal.

Dropsy cured without Purging, or preternatural flow of Urine.—Dec. 4, 1809.—Frances F., aged fourteen, who, though tall and well formed, with a healthy florid countenance, and the general stature of a woman, has never menstruated, and has none of the external marks of puberty, about four months ago, without any previous indisposition, in the course of one or two days, as she asserts, found her whole abdomen swell to a great size, accompanied with a violent pain in her right side, preventing her from lying down. This continued with great indisposition and paucity of urine, but open bowels, for six weeks. She then became much better, though the swelling never wholly subsided. She continued tolerably well till about a fortnight ago, when she was seized with a violent cold in her head, and cough, the latter of which still continues with a little expectoration. About a

week afterwards the swelling again increased, though without pain, and in two or three days reached its present size, which is that of a person in the last month of pregnancy, so that an apothecary in her neighbourhood declared her to be pregnant. The swelling is equal all over her belly, and every where evidently fluctuating. There is an equal soreness on pressure in every part, and no more resistance in one part than in another. She lies equally well on both sides. There is no where any anasarca. Pulse 108, and full, after having walked to my house. Her breath is short from muscular exertion. Urine very small in quantity, and high coloured. Skin cool. Tongue somewhat white, but red round the edges.

On the 30th of November, when I first saw her, I ordered her a purgative of Calomel succeeded by Senna, which was chiefly rejected by vomiting, and produced little evacuation. She has since taken a grain of dried Squill thrice a day.

℞ Hydrargyri submuriatis gr. iij.

Extracti Colocyntidis compos. gr. vij. Ft. Pilulæ
duæ, hac nocte horâ somni sumendæ.

℞ Scillæ radicis exsiccatae ʒj.

Confectionis Rosæ Caninæ q. s. sit. Ft. Pilulæ
lx. æquales. Sumat unam quater indies.

Dec. 7. The medicine only operated once; but her bowels have since been open every day. No sickness. She has occasionally some pain in her left side. Urine as before. Belly less swelled, Pulse 90, and small.

℞ Extracti Colocyntidis compos. gr. x.

Hydrargyri Submuriatis gr. iij. Ft. Pilulæ tres.

hac nocte horâ somni sumendæ, et tertiis singulis noctibus repetendæ. Sumat quotidie Pilulas è Scilla sex.

Dec. 21. She has had daily from one to two motions; but no particular effect from the purging pills, which have been taken thrice. The first six pills of Squill taken in the day made her vomit violently, since which time she has daily taken five without sickness. She has every day made about a quart of high coloured urine. Tongue clean. Cough nearly gone. She has no pain of her belly, which is very much reduced in size. Pulse 112, and hard, at my house. Persistat in usu Pilularum è Scillâ.

Jan. 2, 1810. Five pills taken each day have not produced sickness. She has had daily one or two natural stools. No cough, or pain of the abdomen, in which there is now scarcely any swelling. Urine as before. Pulse 98, and rather hard, at my house. She is nearly free from complaint.

She was desired to continue for some time the Squill pills; and to return to me, if she had occasion: but I saw her no more.

Encysted Dropsy.—1808, Jan. 18, nine A. M. Mrs. C., aged about fifty-five. Tapped last Thursday fortnight, 23d Dec., for the eighth time. Died yesterday, at four P. M., quietly and easily in her chair. Abdomen much swelled, as in the last month of pregnancy. The whole body was much emaciated, and the parietes of the abdomen as thin as possible. When they were opened, there appeared within a bag occupying the whole of the abdomen, extremely

vascular on the fore and right side, and on its fore part only slightly and partially adhering to the parietes. It arose from the uterus itself as from a root, being, as it were, a continuation of its peritonæal coat, which gradually widened as it grew out of the pelvis, carrying along with it the ovaria, which formed the swellings before mentioned. Of these swellings, one on the right side was of an oval form, nine or ten inches in length, and from three to four in its greatest diameter, lying longitudinally in the lumbar region, from the pelvis upwards, almost into that of the thorax. The tumors in the corresponding part of the left side were three in number, of an oval form, lying endways with regard to each other; the two upper ones, which were somewhat the largest, being each about the size of a human kidney. These tumors formed, as it were, a part of the great cyst, projecting considerably inwards, but scarcely perceivable by the eye on its outer side. From the upper part of the great cyst there arose a sort of duplicature or fold, closely embracing it, and running down on the left, so as to form another attachment most on the left side of the pelvis. The whole internal surface of the cyst was rough and irregular, and coated with matter of a thick purulent appearance. The quantity of fluid in the larger cyst amounted to nearly three gallons; that which floated at the top resembling yellowish serum, and the larger proportion at bottom purulent matter. The smaller tumors all contained a mixture of pus and a brownish gelatinous fluid; and their internal surfaces were similar in appearance to that of the great cyst.

The bladder, kidneys, spleen, pancreas, and liver, were in a perfectly sound and healthy state. The stomach and intestinal tube were driven out of their place, and throughout their whole extent smaller than natural.

Hydrothorax and Ascites.—Mr. B., aged seventy, a fat stout man, temperate in his mode of living, had long laboured under difficulty of breathing, with anasarca swellings of his lower extremities, and even abdomen, which were in a great measure removed by punctures in the cellular membrane, and by Digitalis and Tonics. His legs, however, still continued more or less to swell, notwithstanding a permanent wound in one of them, which discharged a considerable quantity of serous fluid.

In the month of September, 1808, nearly two years after the commencement of his malady, it began to return with additional force. Fluid became accumulated in the abdomen; and his breathing by degrees became so laborious, that he was unable to lie down in bed, and on the night of the 1st of November was obliged wholly to remain in an easy chair. His legs, thighs, and scrotum were very much swelled; and his urine was high coloured, turbid, and about a pint daily. In this state, all remedies having been found inefficacious, he was tapped at ten o'clock at night on the 2d of November; and by this operation, performed by Mr. George Norman, twelve quarts of clear fluid were evacuated, which coagulated with heat. After tapping, he went to bed, with no diminution of his difficulty of breathing; in consequence of which, and

of violent pain about the sides of the thorax, he enjoyed no sleep, notwithstanding he took twenty-five drops of Tincture of Opium.

On the third, at two in the afternoon, his breath was nearly in the same state. He complained of pain on each side of the abdomen, about the hypochondria; and his belly was very much swelled. He had had one stool. His pulse was 68 in a minute, full and regular; and there was nothing about him which indicated speedy dissolution.

At six or seven in the evening his respiration became more laborious and rattling. This continued to increase without delirium or any other complaint. On the fourth, in the morning, his pulse was scarcely to be felt; and he died that afternoon at half-past four o'clock.

He was opened by Mr. G. Norman, at eight o'clock the next morning, in my presence.

The scrotum was no longer swelled, and the œdema of the legs and thighs was greatly reduced. The abdomen was very much swelled, but obscurely fluctuating; and very irregular in its surface, as from unequal distention by its contents.

In consequence of some previous discussion as to the best part for performing the paracentesis of the thorax during life, the corpse being flat on its back, an incision was made between the fifth and sixth ribs on the right side, about two inches behind the anterior angle. No fluid ran out, notwithstanding the body was turned on that side. A second incision being made between the same ribs about an inch before the pos-

terior angle, three ounces of fluid were discharged. The body still remaining on its back, an incision was made between the seventh and eighth ribs on the left side, just at the posterior angle; in consequence of which twenty ounces freely ran out of a fluid, clear, in colour similar to high coloured urine, and forming a white coagulum from heat.

The thorax being opened, four ounces of fluid were found remaining in the left side, and two ounces in the right.

In the pericardium there were ten ounces of a similar fluid. The heart was very large. The left ventricle was very thick and strong, and, as well as the left auricle, contained very little blood. The right auricle was distended by a concretion of coagulated lymph. The right ventricle was also distended, though in a less degree, by a similar concretion, which went far into the pulmonary artery. All the valves and the coronary vessels were in a natural state. The aorta at its curvature had under its internal coat several flakes of osseous matter. The lungs were free from disease.

The abdomen contained three beer quarts of fluid similar to that taken away by the tapping. The stomach and colon were much distended with air. The omentum was small, and of a dark colour. The lower part of the ileum was of deep purple hue on its peritonæal coat, but of a natural appearance within. The kidneys, spleen, pancreas, and liver exhibited no marks of disease; but the gall bladder was collapsed, and contained no bile.

Ascites.— April 22, 1809. Mrs. V. was tapped on the nineteenth, and had seventeen beer pints taken away of fluid, like whey, with somewhat of a yellowish tinge. Her bowels had for some days before been somewhat difficult to move; her pulse about 120 in a minute; and her urine turbid, and not exceeding three-quarters of a pint in twenty-four hours. Her strength and flesh were much reduced. Her nights were also extremely bad, from a feeling of violent distention of wind, and borborygmi.

After the tapping, her nights were no better; her pulse, urine, and general feelings as before; but her bowels were opened by purgatives. She became very suddenly weak, and died about half-past twelve in the morning of the 22d. After this tapping, one might for the first time feel several hard protuberances, yielding to the finger, on the right side about the epigastric region, suffering little or no uneasiness on pressure, and not reaching to the region of the liver.

She was opened by Mr. White on the same day, about half-past six in the afternoon.

After death, the protuberances above mentioned were very plainly to be felt; but there was nothing either in their former situation which could lead to any conclusion as to their nature. The body was very much extenuated; little or no fat remaining on the belly.

When the integuments were removed, the nature of the swellings was immediately seen. They were merely the omentum, the lower edge of which reached not more than two inches below the stomach,

forming a transverse ridge of five or six inches in length, entirely hard and scirrhus from a congeries of indurated glands, of which two were much larger than the rest, one being about the size of a chesnut, and the other of a pigeon's egg. A great number of small glands in the mesentery and meso-colon were also in a scirrhus state, so as to give a feeling of almost a stony hardness to those parts. Numerous similar glands were also discoverable in the peritonæal linings of the lower part of the back of the abdominal cavity, and near the pancreas; but none of them were either inflamed or suppurated. The pancreas was very much diminished in size, but of natural texture. The spleen was unusually small, but sound. The liver was in every respect in the natural state; the gall bladder moderately full of bile, and free from gall stones. The liver adhered by its lower surface to the upper part of the stomach. The stomach was of the natural size, but the pyloric portion was considerably thicker than usual, proportionably as it approached to the pylorus itself. The duodenum and small intestines were very large; and the whole of their peritonæal coat suffused with a purplish red colour, as from inflammation. Their surface, in various parts, had attached to it fibrous portions of coagulable lymph, which slightly united some of their convolutions. The peritonæal coat of the parietes was very thick and opaque, here and there roughened with extravasated lymph, but neither in this, nor in any other part throughout its whole extent, was there any thing like recent inflammation. The kidneys were in a natural state.

In the cavity of the abdomen there were about two quarts of transparent serum. The colon throughout its whole extent was much contracted, being no where more than three-quarters of an inch in diameter.

Different Discharges from different Degrees of increased Impetus, or Incapacity of Resistance, in Vessels.—In Mrs. V., the pulse between the periods of the first and second tapplings, exactly fourteen days, was from eight to ten beats quicker than before, and fuller, and her appetite certainly greater. The urine was also less, and proportionably higher coloured, towards the end of the period scarcely equal to three-quarters of a pint, and turbid. The vessels of the peritonæum being thus stimulated, and yielding in a greater degree from increasing incontractility, the extravasated fluid was become turbid like whey, and in the fourteen days amounted to full seventeen beer pints.

The same whey-coloured fluid, serum mixed with coagulable lymph, was also secreted in the case of Miss D., in whom dropsy followed peritonæal inflammation and stoppage of bowels, and the liquid was thrown off to the quantity of a pint by the sudden bursting of the navel; after which the child perfectly recovered, and is now living, seven years afterwards.

Evidence that the Dropsical and Nervous State are the same.—In Mrs. V., long before any disposition to extravasation in the abdomen had taken place, there were constant pains about the belly and sides, and more especially violent borborygmi or rumbling, exactly similar to those in nervous women. These continued through the whole of her complaint,

though somewhat less after the extravasation had begun ; there being at the same time no appearance of disease about the liver, either from hardness, pain, or difficulty of lying on either side.

The borborygmi and rumbling, with a feeling of incapacity to break wind, continued all through the disease, and even within two or three days of tapping ; so that it could not depend on the pressure of the water. The event and dissection shewed slow peritonæal inflammation of the bowels, with sound liver.

Curious reason for a Dropsy ; self-deception.—
Oct. 16, 1808. I was sent for to attend Mr. A., about forty years of age, a great dram drinker, whom I found labouring under ascites, anasarca, and jaundice, and who, to my inquiries as to the cause of his complaints, gave me, with a grave countenance, the following answer : “ I had been on a Sunday with a
“ friend in the country, with whom I dined, and
“ drank a cheerful glass, but, according to my custom,
“ very temperately. I came home, and went to bed.
“ I was always used to keep a bottle of gin by my
“ bedside, of which I sometimes drank a teaspoonful
“ or two during the night, whenever I had wind or
“ pain in my stomach. On this unfortunate night,
“ feeling my stomach not well, I put out my hand
“ and reached the bottle, of which I drank, but did
“ not discover that by mistake I had taken water, till
“ I had drank nearly half a pint. I felt it very cold
“ in my stomach, and immediately endeavoured as
“ well as I could to counteract the injury by the gin, of
“ which I drank about two glasses. It proved, how-

“ever, that the quantity which I drank was not
“sufficient, and in consequence of this inexcusable
“negligence, I was taken with my dropsy on the
“Tuesday following.”

Tertian Ague.—Dr. C., Jan. 17, 1802, had for two years laboured under an incurable tertian ague. He had taken arsenic, so as to produce paralysis of the extremities; and as long as bark would stay on his stomach, used to avoid the fit; but after three or four days it used to make him vomit not only itself, but every thing else, so that it could not be continued. Nothing else prevented the fit.

Dissection.—The integuments had three-quarters of an inch of fat. The mesentery, and peritonæal coat of the small intestines, were full of small scirrhus glands; and also the peritonæal coat of the parietes of the abdomen, as full as possible. The mesentery was very much thickened. There was nearly a quart of fluid in the abdomen. The omentum was very much contracted, and variously adhering; tolerably fat. The liver adhered strongly in its upper part to the peritonæum. The peritonæal covering of the colon was free from disease; the liver itself sound, and the spleen sound. In the stomach was a pint of brown glairy fluid; its coats were natural. The intestines were in a natural state.*

Tænia, treated by Ol. Tereb.—John W., aged thirty-nine, plasterer and tiler, at various times, for ten years complained of a gnawing pain in his loins,

* The abdominal affection exhibited in the dissection of this case was the inducement for placing it under this general title.—ED.

chiefly near the sacrum, with occasional sickness, and great appetite, which he was with difficulty able to satiate. During this period he often evacuated portions of *tænia* of various sizes, occasionally a yard in length. For this malady he had taken rue, Ching's worm lozenges, and a great variety of other medicines, but all with little effect. He continued able to work, slept well, was free from headach, and was moderately fat.

I ordered him the following medicine.

℞ Olei Terebinthinæ rectificati ℥ij.

Spirit. Lavand. compos. ℥iss. M. sum^t. horâ somni coch. amplum unum, phialâ agitatâ, ex aquæ cochlearibus tribus amplis.

From this medicine he soon became giddy, as if from drunkenness, and was sick, but did not vomit. In about an hour it began to act on his bowels, and operated fourteen or fifteen times. Examining his stools on the following morning, he found in one of them one single portion of *tænia*, sixteen feet in length. He was rather faint, but went to work as usual.

Some days afterwards he repeated his medicine, which produced sickness, but less purging than before. No sign of any *tænia* appeared; and a month after this second exhibition I saw the patient, who continued perfectly free from complaint.

Piles.—Sir N. G. had piles once a month, till he was fifty. Mr. M. once in three weeks, till he was about the same age. So also Major W.

[March 2, 1808.]

**AFFECTIONS OF THE URINARY
ORGANS.**

ORGANS OF THE URINARY
AFFECTIONS OF THE URINARY

DYSURIA, &c.

Suppression of Urine.—This very often occurs, and, I believe, destroys life, where it is not at all suspected. Mrs. Anne N., an unmarried lady, seventy years of age, used frequently to menstruate gently for three or more days, at regular periods, without any apparent deviation from health. Exercise did not appear to increase this flux, which was unaccompanied with fever, shivering, emaciation, pain, or loss of appetite. At length she was seized with some difficulty of making water, which, however, was made in the quantity of more than a pint in the day, rather high coloured. At the same time there was a considerable tumor of the abdomen, sickness, a very dry tongue, and quick pulse, and obstinate constipation. After two or three days, no uneasiness remained about the bladder, or any particular feeling as if she wanted to make water, of which from four to six ounces were now and then discharged at once; but the bowels continuing for several days not to act, with tumor and general soreness of the abdomen on pres-

sure, and medicines by the mouth being thrown up, a large quantity, at least three pints, of salt and water were thrown into the bowels with the double injecting syringe, which was followed by three or four very large fetid evacuations. The same night three quarters of a pint of high coloured thick water were passed. The pulse became quicker, up to 130 in a minute; the tongue drier; the skin more hot; the jactation greater, with some delirium; and the tension and swelling of the abdomen were not at all abated. The following day she died.

On opening the body, there was no disease in the alimentary canal; but the uterus was extremely enlarged, containing several large collections of matter, so as to press on the neck of the bladder, and prevent the evacuation of the urine, of which there were three quarts in the bladder, which was the immediate cause of death.

Soon after this, I was called to see Lady N., a widow who had had children, between fifty and sixty years of age, and thin, who for several days was said to have laboured under a pain in the bowels, with some slight difficulty of making water for two or three of the first days, which had not yielded to repeated purging. She was restless; had a rather quick pulse, and thirst, with little heat on the skin; and still some pain, which she said was in her bowels. There was a frequent complaining of general uneasiness, and great jactation and sleeplessness, without headach, cough, or any other sensation of pain, except a slight uneasiness in the lower bowels, which was not much

increased on pressure, and where there was not, as far as I could discover, any tumor or preternatural hardness. From observing so little relief from purging first, and then regular motions, and recollecting that she had at first been able to get rid of the want of making urine, which was high coloured and too small in quantity, though about twelve or fourteen ounces in the twenty-four hours, I called to remembrance the case of Mrs. A. N., and expressed my belief that all the symptoms arose from retained urine. The lady would not believe that this was the case, but on my urging her, assented to have a catheter introduced. This was done about eight in the evening without effect. Only a few drops of urine passed, though some pressure was made on the bladder. The following morning, however, about three o'clock, she was seized with an inclination to make water, and in an hour and a half passed, at different times, between two and three quarts, of high coloured and turbid urine. From that time no further suppression took place, urine was immediately obtained, and in a few days she was quite well.

It appears to me, that after the second day, or somewhat more, the distinctive pain in the bladder, such as indicates the necessity of making water, usually ceases ; and the patient, with the bladder full, denies, as in the case of J. on the Borough-Walls, that they want to make water, except when a good deal is evacuated, in which case the pain will, from the distention being occasionally diminished, continue longer : and in many instances great and fatal accumulation may

occur, though the patient may make daily from half a pint to a pint of urine. It often happens in suppressions that a patient dies from the bladder's being full, notwithstanding the introduction of the catheter into the bladder. I have seen several instances of this kind proved by dissection. In a patient I had with Mr. Grant, the catheter was introduced, but no urine flowed. I proposed pressure about the abdomen and fundus of the bladder, which was done, and the urine immediately passed, and by continuing it the bladder was emptied.

It seems as if the bladder by distention had lost its contractile power, and that the diaphragm and abdominal muscles, which usually assist in propelling the urine, do not act either from sympathy, or more probably from the patient not willing with sufficient strength to act, where acting is, or has long been, painful; just as a man says he cannot turn in his bed, when the lumbago makes it exquisitely painful for him to do so, not because the muscles are unable to follow the dictates of desire, or as it is called will, but because his apprehension of suffering counteracts and overcomes the desire or will, so that it is not sufficiently exerted.

On some occasions, however, the action of these muscles is called forth by cathartics, which irresistibly produce such a state of the bowels as is usually attended with the contraction of those muscles; and then the patient will make water. Mr. Hunter with this view proposed large doses of Calomel; and I have found stimulating glysters produce the same

effect, as in the case of Mrs. R., who immediately made water after a most painful suppression of many hours, within a fortnight after lying in ; in which case Dr. P. said that it was impossible to relieve the complaint without the introduction of the catheter.

In a most obstinate case of this kind, eight or nine days after lying in, Mrs. C., Mr. Goldstone, jun. had several times introduced the catheter with effect, and so as to draw off a full pint the night before my being called in, about eighteen hours afterwards. She had been bled, and the blood was covered with a thick crust of coagulable lymph ; and had taken a purgative without sufficient operation. I found the abdomen much swelled, with great pain on pressure, with a quick pulse ; the urine was said to be high coloured but clear. I ordered a Calomel purgative, followed in two hours by infusion of Senna, which had operated by evening, when I again saw her. The catheter was then again by my desire introduced as she lay on her side ; but only a few drops of urine came. I proposed that she should kneel and lean forwards, so as to make the neck of the bladder the most depending part. No efforts which she was able to make were however sufficient to produce any flow of urine. I made very hard pressure with one hand on the lower part of the abdomen, and a counter pressure with the other hand on the back. Some urine flowed. I then desired that while I made this pressure, she would assist it by straining. Both the pressure and straining were very painful to her, and the latter performed with great reluctance, till I assured her

that her life depended on her own exertions. She persevered, and by this double pressure the water began to flow much more copiously, and above a pint of high coloured thickish water was evacuated. At this period, in consequence of straining, some loose stool came away. She was permitted to rest; and was again subjected to the same means, which, after one or two hours, seemed entirely to empty the bladder, and the swelling and tension of the abdomen disappeared. She took an opiate at night, and repeated the opening medicine. The next day she made water twice without help, and recovered without any further attendance from me.

In some cases one can plainly enough distinguish the bladder to be full; though sometimes, as in Lady N. and other patients, no apparent tension, or feeling of uneasiness on pressure, occurs about the abdomen or bladder. Miss Y., aged eleven, a small thin girl, was seized, without any apparent cause, with difficulty and then a partial suppression of urine, but without its being suspected that there was any considerable retention, or that the bladder was the seat of her complaint. On putting my hand on the abdomen, I found it tense, and with careful examination could distinguish the fundus of the bladder half way between the os pubis and the umbilicus. A catheter was introduced, but very little water flowed; but perseverance in pressure, assisted by the posture of kneeling and exertion on the part of the child, completely succeeded in emptying the bladder, and she immediately recovered without any relapse.

I am persuaded that many cases occur, in which people greatly suffer, and even die of accumulation of urine, where it is not suspected, because there is not a total suppression.

This is peculiarly common in fevers, and in those more especially in which the patient is delirious. A female whom I was called to visit in the summer of 1811, had for several days laboured under acute rheumatism, which had been accompanied with delirium, but was considerably abated. Some high coloured urine had constantly passed; but as the quantity was small, there was more of general distress than was proportioned to what remained of the rheumatic inflammation, I could not help suspecting the existence of a cause from which I had often seen so troublesome and dangerous effects. Although, therefore, the patient had not complained of any pain about the region of the bladder, I thought it right to make the due examination; on which I found the abdomen, from the pubes to the scrobiculus cordis, extremely hard and tumid, with some obscure fluctuation. A catheter was as soon as possible passed, between two and three quarts of very high coloured and turbid urine without difficulty flowed, and the abdomen was immediately reduced to its natural size. From that period the patient recovered, though it was necessary during many days to repeat the operation.

I am also sure that many persons die of suppressions, where it is presumed that the bladder is empty, because, for the reasons before mentioned, no urine

follows the introduction of the catheter ; and a fatal termination follows the want of sufficient perseverance.

Not that, at a certain period of the complaint, every one will recover, in whom the bladder is thoroughly evacuated. The suppression or accumulation are themselves a frequent consequence of some disease in the bladder itself, which would prove fatal if it did not cause accumulation. But it is more often the accumulation itself which kills, or which brings on irrecoverable disease of the bladder. Even voluntary retention has often dangerous consequences. Miss N.'s maid, though perfectly well before, unable to make water from being an unusual number of hours on her passage by sea from Ireland, suffered great pain at the time, and never, for many years afterwards, when she died hectic, was free from disease of the bladder, accompanied with incapacity of retaining much urine, the discharge of filaments of mucus, and occasionally blood, and continual pain.

Wherever there is a disease in the bladder itself, that will however shew itself by its own symptoms, and more especially by some constant or frequent morbid state of the urine itself, which is chiefly mucus, or purulency, occasionally streaked with blood, rendering the water turbid when first made, more especially that which is last made, while the first is often clear, and falling to the bottom of the utensil on rest, sometimes so as to nearly half the whole quantity passed. In Monsieur De H. there was frequent difficulty in making water, which was without sediment, but often with different proportions of blood in

different states, generally red, but sometimes more or less coffee-coloured, and often very profuse. He could make water in a full stream, for which reason it was judged that there was no disease of the urethra, and little or none of the prostate gland, and therefore no examination was made with bougie, &c. for fear of irritation. He became pale, and died apparently from long continued hæmorrhage. On being opened, there appeared a fungus of the appearance of pancreas all round the neck of the bladder, from which the blood had continually issued, and which, if any attempt had been made to introduce a bougie or catheter, the instrument would inevitably have pierced.

Though complaints of this kind, in themselves fatal, may cause suppressions or accumulations of urine which precipitate the termination, it more frequently happens that these accumulations are the effect of some hidden and transitory cause, which the efforts of the constitution itself will with some assistance cure, provided the accumulation itself, which, though the effect, is usually the occasion of the fatal termination, is effectually and for a considerable length of time removed. Sometimes even a single operation is sufficient to produce a compleat cure. This ought, however, to be promoted by all those means which tend to abstract stimulus, as aperients, sedatives, low diet, and even bleeding, if necessary, either from the arm, or by leeches applied to the pubes or perinæum. It will, however, sometimes happen, that though the urine may at a late period of retention

have been completely evacuated, the disease induced by it in the bladder may prove fatal.

Suppression or Dysuria sometimes accompanies an inflamed state of uterus, just as I before explained, not from mechanical pressure, but because the act of straining is painful. So both going to stool and making water are painful in lumbago, &c.

I think it often happens, in men, that in suppressions, the introduction of the catheter itself by unskilful persons brings on an inflammatory state, followed by morbid secretion from the mucous membrane, which continues long with great suffering and dysuria, though it eventually gets well, as in Mr. M.

In Mr. T. there were, first, *mumps*; then, when that went away, *swelled testicles*; then, on the recession of that disease, *suppression of urine*, probably from an inflammatory affection of the neck of the bladder. The urine was drawn off by the catheter, and he was bled generally and topically, and had aperients, refrigerants, &c.; after which the fever and local symptoms disappeared.

Bloody Urine cured by Blood-Letting.—I visited a boy at Trowbridge, who after the measles made bloody urine, accompanied with fever. This patient, after the ineffectual use of various other remedies, was immediately cured by blood-letting.

Laws of Inquiry into obscure Disease.—*Diabetes.*—When a man is labouring under loss of appetite, debility, quickness of pulse, or emaciation, one has just reason to suspect local disease; and in order to obtain a knowledge of this, it is not sufficient that we

inquire whether there is, or has been, pain any where, or tenderness to the touch ; but also whether there is any morbid change of structure as cognizable by the eye or hand ; and also whether there is any local heat, preternatural fulness of arteries or veins, or diminished or increased secretion. In this latter way I have known diabetes detected, when it was unknown to, or, at least, scarcely noticed by, the patient.

Diabetes.—Many persons die of the diabetic constitution, after the morbid flow of urine has ceased ; just as persons often die of the hydropic constitution, after the fluid effused into the abdomen has been spontaneously absorbed. This proves that neither the one nor the other secretion is the disease itself, but only the *effect* of a disease ; of which, indeed, the latter, or dropsy, is often the cure.

Diabetes Mellita.—June 9, 1814. Mr. B., aged thirty-five, a farmer, florid in his countenance, and of middle size, accustomed to drink freely of stale beer and cyder, was ten months ago, apparently in consequence of alternations of cold and heat during hay-making, seized with a vomiting and purging, which were not of long duration, but were accompanied with considerable loss of strength, and followed by emaciation, which has continued till the present time, though it has not reached a very great height. From the commencement of these symptoms, he became affected with a great increase of urine, which is of a pale straw colour, with little of the urinous smell, slightly sweet to the taste, and amounting in quantity to about seven quarts daily ; which is double the amount of the

liquor which he drinks. For seven or eight months past he has been liable to rheumatic affections of the lower extremities, accompanied, as he says, with some swellings, though I cannot now perceive any thing of the latter state. His bowels are costive ; his appetite is bad ; his stomach flatulent, but not apparently acid ; his tongue is white ; and he has considerable thirst. His pulse is about 80 in a minute, and at this time full ; but I find it varying considerably at different times, and though the day is cold, he sweats all over his head and hands with walking up to my house in his great coat.

At my desire he was blooded yesterday, and, according to the report of my friend Mr. Pearce, surgeon, of Bradford, “ the blood was received into
“ three teacups ; and though the orifice was large, the
“ blood ran down the arm. At the end of four hours,
“ the serum had separated, and appeared rather turbid,
“ but in proper proportion. The crassamentum was
“ not particularly firm, and was neither cupped on
“ the surface, nor shewed any appearance of coagu-
“ lable lymph.”

June 10. He was desired to avoid fruit, acids, pickles, sugar, new bread, cheese, salads, all fermented liquors, and spirits ; and to drink plain water ; and to take the following medicines, having first taken in the evening twenty grains of Ipecacuanha as an emetic.

℞ Aloes Barbad.

Pulv. fol. Digit. āā gr. xviii. Ft. Pil. xviii.

Sumat unam mer. et h. s. quotidie.

℞ Pot. Carb. ʒiij.

Aq. ʒviii. Sum^t ʒij ter die.

June 18. He became better on the second day. His urine being only half the quantity. Pulse 72. His tongue cleaner. The Aloës having operated four or five times, he now takes only half the quantity.

June 22. He had adhered closely to the plan of diet and medicine. His urine continues pale and sweet; but in smell somewhat more healthy. Bowels regular. Less thirst. Appetite good. The state of the pulse and water were as follows:

			Quarts.
June 12.	Pulse 82,	Water	$3\frac{1}{2}$.
— 14.	— 71,	—	3.
— 16.	— 80,	—	4.
— 18.	— 72,	—	3.
— 19.	— —	—	$3\frac{1}{2}$.
— 20.	— 73,	—	$2\frac{1}{2}$.
— 21.	— —	—	4.
— 22.	— 80,	—	$2\frac{1}{2}$.
— 26.	— —	—	3.
— 27.	— 84,	—	$3\frac{1}{2}$.
— 28.	— 88,	—	$4\frac{1}{2}$.

June 29. The urine is still sweet. He drank yesterday only three half pints of fluid. He has pain in his stomach, with much wind. Complains of weakness. Is hot and sweating. Has never any sweetness in his mouth, or acidity. Appetite worse. Pulse 84, and soft. Two stools daily.

Addatur Misturæ Pot. Carb. ʒj. ʒij quinquies in die. Pil. u. a.*

Diabetes, &c.—April 10, 1812. Mr. H., aged

* This case ends abruptly, and is given merely in respect to the plan of treatment.

thirty-seven, a month before my first visit to him in the country in January 1800, had in riding received a violent blow on his head from a branch of an oak, which left him senseless for three quarters of an hour, and was followed by great determination of blood to his head, great nervous irritability, double and triple vision, bleeding at the nose, &c. When I saw him, there was still great disorder of the head, with paralysis of the throat and limbs, first on one side, then on the other, together with occasional fever and delirium. These complaints, after having recurred in many paroxysms, gradually diminished under a most rigid antiphlogistic plan during three or four years, and then nearly disappeared.

Nearly two years and a half ago he was seized with diabetes, in which he made daily four or five quarts of sweet urine. It was accompanied with a very quick, strong, and hard pulse; an extremely dry tongue; great heat of the skin; night sweats; and progressive emaciation. A diet of animal food, the abstraction of acids and acescents, and the use of Carbonate of Potash with Rhubarb, soon removed the superabundance of urine, which, till it was reduced to its natural proportion, or about three-fifths of the moderate quantity of liquid which he drank, continued to have the saccharine taste. About the month of March 1810, the diseased state of the urine had entirely ceased; but the fever, with all the other symptoms, continued with undiminished violence. At this period he was blooded, and the blood exhibited the usual inflammatory crust. He was then directed by me to

use a shower bath, which was employed, at first with one-fifth part of boiling water, and afterwards entirely cold. This measure was continued all through the winter, on the sea coast. In the month of July 1811, I saw him wholly free from disease. He had regained his flesh; and occasionally permitted himself some imprudent indulgencies in diet. He has now, ever since last September, been affected with cough, accompanied with fever. The cough is at this time frequent, and attended with expectoration, apparently purulent; and he has frequent shiverings at night, succeeded by heat and sweating. He is much troubled with diarrhoea, which came on in December, and affects him six or seven times in the twenty-four hours. His tongue is very dry; pulse 96, and soft; and he is greatly emaciated.

Some months afterwards Mr. H. died, with all the symptoms of pulmonary consumption.

Diabetes symptomatic of Syphilis.—Mr. A., aged between twenty and thirty, had long laboured under pains which were supposed to be rheumatic, attended with a pulse of 130 in a minute; loss of appetite; great emaciation; and prostration of strength. These symptoms were accompanied with a preternatural flow of pale urine, which chiefly took place during the night, to the amount of several quarts. Various remedies had been ineffectually tried by different medical practitioners when I first saw him. Shortly after this period, a node, with all the characters of secondary Syphilis, happily made its appearance on his shin. A grain of Calomel in form of the Plum-

mer's pill was given him twice a day. No sensible effect was produced by it on any of the secretions; notwithstanding which, at the end of a week, the frequency of the pulse began to abate, and in two days more was altogether removed. At the same time the appetite was restored; and the urine returned to its natural state.

A few months afterwards I saw this gentleman so altered by fatness, that I did not know him. He had experienced no return of complaint; but a small splinter of bone had come away from his nose, so, however, as to produce neither deformity nor change of voice.

CALCULUS.

Observations on the Gravel, written from my own actual feelings, five and a half P. M. Nov. 12, 1808, after having obtained some ease from a most violent fit, which began about eight in the morning.—Some symptoms had occurred for four or five days, such as pain in the left side of the belly, of an acute kind, on sneezing during a violent catarrh with which I was for some days affected. I had for a considerable time, several weeks, desisted from the use of the Aqua Kali Carbonata, of which I had been in the habit of taking daily as much as contained five or six scruples of the Kali. I had also occasionally, though in very small quantities, eaten apples and pears, a peach or two, bread either toasted or untoasted with cold butter, and once or twice had drank a little coffee. For some weeks, from these causes, I had frequent purgings, great acidity, occasional nidorous eructations, and several attacks of water brash. In consequence of great professional avocation, I dined at very irregular hours, often not till half-past seven or even nine o'clock,

eating nothing from nine in the morning till that hour. I went to bed late, and from startings, when first about to doze, and occasional feelings of numbness in my arms and hands, was long in going to sleep. I was obliged also, from various causes, among the rest an attendance on several dissections, to rise before it was light, and was called up in the night on professional business, in consequence of all which my hours of sleep were very few. My bowels, after the cessation of the purging, became unusually costive, scarcely acting from half or a whole Scots' Pill, which for many years I had daily taken, and which used regularly to operate in the morning before I went out, and at night just before going to bed. The night evacuation I now generally missed; and had only an imperfect and unsatisfactory one through the day. My feet were also more subject to coldness than usual, though well clothed. On the tenth I had a bad muscular headach, such as I used formerly to be much troubled with; and it arose now from the same want of due action in the alimentary canal; and left me on the shifting downwards of much wind and some fæces. My appetite was not good, my stomach soon satisfied, and readily oppressed with food. I had several attacks of water brash. On the preceding night, from some unusual exertion, my urine was tinged with fresh blood. For some days I had now and then a transient qualm of sickness, and a little itching about the left hip.

This morning, between seven and eight, I went to a dissection. While so engaged, after an insufficient evacuation, I suffered an increase, but not a violent

one of pain, exactly in the seat of the right kidney, which was soon followed by slight momentary nausea, and great faintness and extreme coldness, though without shivering, or any affection of the pulse, except that it became weaker than usual. Between nine and ten I visited a patient; and at ten the faintness and general weakness in my limbs still increasing, with difficulty walked home. The pain now increased to an excruciating degree, accompanied with a most intolerable coldness, and at the same time the faintness went off.

I lay down on a sofa. I felt as if a change of posture would immediately relieve the pain; but there was none which afforded any important alleviation. I could, however, plainly perceive on this, as on many former occasions, that almost any change of posture, if extremely gentle, produced a mitigation, though only for a few seconds; but that any stronger motion, as even that of talking, increased the pain. The pain was also evidently aggravated by lying on the opposite side, and it was rather least when I lay on the same side, somewhat inclining to my back. Pressure on the side of the belly increased the pain. It was of an aching kind, occasionally sharp and throbbing, seemed to extend up into the thorax, and was increased at each inspiration.

It now began to be felt less above the spine of the ileum, and went more into the belly. About half past eleven, feeling somewhat sick, and being unable to remove the coldness, I took a pint of water with

mustard in it, for the purpose of exciting vomiting, from which, on former occasions, I had found relief. My stomach was immediately thrown into strong convulsive contractions; but though I drank more of the mustard and water, and kept my finger long in my throat, I could not succeed in exciting vomiting. The pain was not alleviated by these efforts. Soon afterwards it became indeed, if possible, more violent. It was evidently of a forcing kind, as if something was pressing forward, and as often receding through a strongly resisting and highly sensible part, resembling what one might conceive to be the sensation of a sword run through that part of the body, and continually moved backwards and forwards. At the same time there was a sensation of deep-seated painful scraping on a small spot in the middle of the fore part of the left thigh, which became somewhat sore to the touch on pretty hard pressure. At this time, and always afterwards during the paroxysm, I could, by any attention, determine that the pain which I felt was not in the bowels. Now and then I had a sort of starting tremulous feeling in the left side; but whether in the ureter or bowel, I was equally at a loss to decide. About nine A. M. I had taken ℥jss. of unmixed Tinct. of Rhubarb, but not the least warmth followed its use, either in my stomach or extremities; though at another time a single tea-spoonful of any spirituous liquor, or half a glass of any wine, would produce an uneasy burning in my stomach. I had all this time no retraction or feeling of uneasiness in the testicle, and no desire to make water. There was no

motion in my bowels, where, as in my feet, all seemed torpid and dead.

At twelve o'clock, I took twenty-five drops of Laudanum; from which during nearly an hour I felt no change, except that it then brought on a slight giddiness in my head, and a further tendency to sickness. The pain advanced lower, comprehending a small part of the bladder, which seemed to suffer a violent scraping or rasping. This was accompanied with a disposition to make urine, of which I passed, with ease, about three ounces, of a reddish brown colour, evidently from an admixture of blood. From this period to the conclusion of the paroxysm, the desire to make water, with only one or two ounces in the bladder, now and then returned; and I observed, that it pretty uniformly, for a short time, diminished the pain of the bladder and side.

A little after one o'clock, after a very great aggravation of suffering, I chose the posture before mentioned, in which I was determined, if possible, to remain quiet and motionless. The pain very slowly abated, so that I dozed for some time, but about half past one was roused by the arrival of a medical friend. I went up stairs to bed, which again augmented the pain. A glyster, which consisted of warm water, was immediately injected; but brought no wind or fæces with it, though I had pretty strong expulsive efforts, and that from a considerable height in the bowels; and it seemed to me that if I could freely evacuate, I should at once get rid of the offending cause. From this process altogether my sufferings were again

rendered much more tolerable. They seemed to recur more by fits, and be now almost wholly confined to the entrance of the ureter into the bladder, without generally occupying so large a space, or calling the adjacent parts so much into sympathy. Occasionally, indeed, the pain would extend itself upwards as high as the hip. I lay down, and placed myself in the posture as before. Between three and four, after a more violent protrusive feeling of pain than had before for a considerable time occurred, I felt an acute pain on the left side of the neck of the bladder. Instantly that of the ureter and kidney entirely ceased.

I now inferred that a calculus had entered the bladder, but I could not decide that the calculus was but one, or that it might not have left some portion behind. After some time, I concluded the latter to be the case, from a greater recurrence of pain, though not equal to the worst which I had before experienced. It is true that some pain and tenderness will continue, though not in a violent degree, both in the ureter and in the bladder, or urethra, from the wounding of those parts by a rough stone which has entirely quitted them. But this seems to want the forcing feel which attends an expulsive effort of the ureter and bladder, when they act on a real calculus. In about half an hour after this recurrence of pain, another plunge was felt on the left of the neck of the bladder, and the pain in the ureter again ceased; and now, at seven o'clock, has not returned.

There are evidently one or more calculi in the bladder. They excite constant uneasiness of a scra-

ping or plunging kind, especially during the last efforts to empty the bladder in passing urine. Making water affords only a temporary sense of sufficient evacuation. As the uneasiness is confined only to the left side of the neck of the bladder, produces about the rectum no tenesmus or inclination to go to stool, nor any smarting or obstruction in the urethra itself, I infer that they are not got near the commencement of the passage.

Though I have at this time no pain or any sensible uneasiness in the ureter or kidney, I still continue to pass urine, which is much darker than before, being similar in colour to weak coffee, and still small in quantity. If it came from the bladder itself, it would be certainly red; for it would not change from red to black during the hour or two which it remained in the bladder. It is, doubtless, a slow extravasation from the kidney or ureter itself, and I trust does not indicate another stone in the former, but is rather the effect of past injury. This, however, is by no means certain. The discolouration of the urine is far from being proportioned to the degree of pain. The kidney itself has very little sensibility. Formidable and even fatal diseases, producing swelling, hydatids, waste, ending in suppuration itself, often take place without much suffering or any distinctive marks of local affection. In a Noble Lord, the kidney had grown to the weight of nine pounds, the urine being, at a very advanced period of the disease, natural both as to colour and quantity. He had been attended by various medical men, who had no

suspicion of the nature of the complaint, and died apparently not from the state of the diseased organ itself, as from its effects on the adjacent parts. Calculus will remain in the kidney days and even months without being felt; and the first knowledge which I have had of its existence, has been sometimes by an occasional momentary qualm of sickness, or an itching before or behind the corresponding part of the loins; more usually by a constant secretion of large quantities of pale urine, occasionally tinged by different shades of brown, sometimes so slight as not to be noticed, except by those whose attention has been peculiarly called to this disease, and even sometimes by an admixture of florid blood. On other occasions, when the pain in the ureter has been excessive, little or no change has been perceived in the colour of the urine, but it is passed in small quantities at once, and when closely observed, is found occasionally to contain small irregular floating portions, of an appearance sometimes a little tending to a brownish colour.

To resume the description of the present attack. As soon as the first calculus had issued from the ureter, the excessive torpor of my bowels decreased. Wind and other contents began to roll freely in every direction; the pulse became more full and strong, and warmth returned to the hands and arms; but it was not till near seven o'clock, that my feet and legs resumed their natural heat; and since that time, though I have not eaten two ounces of food, or drank any thing but *Aqua Kali Carbonica* and cold water,

my skin is in general preternaturally hot, and I have (nine o'clock) considerable thirst.

Neither the T. of Rhubarb, nor eight grains of compound powder of Scammony, taken at two o'clock, have as yet operated. From four I have sat up in the bed writing the above. At ten I got up. About eleven P. M. had two motions somewhat loose. Have pain at times in the direction of the arch of the colon; but whether from the aperient, or from the complaint, I cannot tell. It comes in short fits. As till four o'clock it appeared to me that having a copious stool would carry off all my complaints, so now it seems to me as if fully evacuating the bladder would have the same effect.

Nov. 13, ten A. M. Slept well all night, and waked at a quarter before nine, with very little pain, but occasional twinges about both hips. Made about three quarters of a pint of water, still of a coffee tinge, but less deep; from which a plunging pain commenced about the left side of the neck of the bladder, which has continued till now, and is aggravated so as to amount to a sort of scraping by walking, while that exercise produces no uneasiness in the sides, loins, or belly. There is also some irritation about the rectum, with a disposition to go to stool. This, however, is slight; and whether it arises from calculus near the neck of the bladder, or fæces in the rectum, I cannot, by my feelings, tell; especially as in introducing the glyster pipe yesterday, the skin of the anus was somewhat lacerated, so as to produce a slight effusion of blood. Urine, passed again soon after-

wards in small quantity, is of a still paler tinge, and somewhat more red ; after which there is a considerable scraping or grinding pain on the left of the neck of the bladder, ascending more towards the kidney.

Visited thirty patients before dinner, in a chair one, others in my carriage and on foot ; from all which exertion the plunging pain, and sometimes the scraping on the left side of the neck of the bladder, were increased by fits, and most from the chair and from walking. Had little or no uneasiness about the abdomen or loin, till late at night, when, about eleven, I felt as if the parts were fatigued from violent exercise. Urine passed at different times, in the quantity of three or four ounces at once, was all day of the colour of porter ; but when I waited only a short time, so that not more than a table spoonful was collected in the bladder, it was slightly tinged with florid red, as from fresh blood.

Half-past two o'clock, P. M. Having now visited fourteen patients, I observe that the pain about the side of the neck of the bladder is uniformly much increased after making water, and also by walking, and by the shaking of the carriage. It has consisted of a violent plunging, coming on by fits, which occur chiefly after making water, though the impulse to evacuate the bladder is almost irresistible. The desire seems in some degree removed by the evacuation, but the other pain increases, but lessens about an hour afterwards ; is greater in walking than in the carriage, and does not seem proportioned to the degree of jolting from the occasional roughness in some parts of the road.

In the evening about eight I lay down on a sofa, having more of grinding or scraping pain diffused about the bladder, than at any time during the day. This was much aggravated, and extended upwards towards the left kidney when I lay on the right side, but immediately ceased when I lay on the left, a little towards the back, with the body quite straight. Urine made just before going to bed, after this rest more or less for two or three hours, was much less tinged than at any period before since the commencement of the attack. I had a loose motion about eleven at night, had no fever or particular thirst ; but my appetite was defective, as it had usually been the day after taking Laudanum. Had no pain on lying down, and slept well till about four in the morning of the 14th, when I made about five ounces of urine of a pale coffee tinge ; after which I had no pain, slept till eight, when I made about six ounces more, rather high coloured, but with little perceptible shade of brown. In various of the last quantities of urine there had been a few specks or scales of a browner colour than the rest. After making water the last time, felt a slight and momentary uneasiness on the left side of the neck of the bladder, and more of a pricking sensation than before about the commencement of the urethra.

Eleven A. M. Had a good deal of flatulency in my bowels, but without stool ; and had, on moving, uneasiness of back and loins similar to what happened last night, but in rather a greater degree. This did not, however, appear to be increased by very quick

driving during my visits to four very widely distant patients. I had occasionally a darting pain over the right hip, as if from calculus in the right kidney.

At two P. M. after many other visits, I returned home for half an hour, having been for the last two hours perfectly free from all pain, except now about the beginning of the urethra, which produced a feeling of pressure about the anus. I retained as much urine as I was able, and had a very urgent desire to pass that and a stool. I did so, and felt the pricking sensation with the last drops, as though the calculus were entering the bulb of the urethra. I continued my visits, first in my carriage, and then on foot, till seven o'clock, having still, though with great pain and difficulty, retained my urine. The disposition to pass it did not commence till I began to walk, and was evidently produced by that exertion, being renewed with an inclination to go to stool, and a kind of grinding about the sacrum, by the exertion of walking after I left each patient, and ceasing as uniformly when I came to sit down with each which followed.

At seven I passed urine, but had no stool; when another ineffectual effort towards the urethra accompanied the concluding part of the evacuation, and continued for some time after, so I thought the stone was actually got into the urethra. At half-past ten, however, I evacuated the water in a full stream, and with great force, from the unusual disposition to contraction in the bladder. No stone appeared, but on sitting down to go to stool, without effect, a few remaining drops seemed to press the

stone farther into the beginning of the urethra than it had been before, with great pricking and pain.

I went to bed and slept well, waking on the 15th, without any uneasiness, which, however, came on, as described last night, when I sat up in bed. I made water, and passed with some smarting, portions of small gravel, with some rather high coloured urine, and a good many particles of small sand, all of a reddish colour; but it was evident, from great increase of uneasiness about the neck of the bladder, that much more remained behind. This was again much increased by the action of walking, which I began a little after eight o'clock, and continued till twelve. From that time I visited in my carriage. At three-quarters past one, passed two calculi, after which I had a violent pricking in the urethra all down to the rectum, with a sense of burning and smarting in both parts. The urine which came with these calculi was only about 3j, high coloured and rather turbid; and after the stones had passed, I had great strangury, passing forcibly a few drops of urine slightly tinged with blood, with great increase of all the symptoms about the urethra and anus. These symptoms continued very violent, till I returned home at a quarter before five, when I passed two other calculi, and became immediately easy.

At five I set out in a hack chaise to visit a patient ten miles distant; but in about half a mile, a slight stinging and pricking again suddenly began about the urethra and anus, as if from another calculus irritating the neck of the bladder. I made at times after-

wards a large quantity of pale urine, with some indication of the continuance of the same lodgment, and till eleven, when I ceased my visits for the day, was not without occasional twinges of the same kind from walking and gestation. What became of this last gravel, if any there were, I know not.

During the whole of this time, there was not the smallest mucous sediment in the urine.

The paroxysm might now be considered as completely finished.

This description of an actual fit of calculus in the kidney, taken from my own recent feelings, will doubtless be considered as accurate; but I may add other particulars, which I have either set down, or which are by frequent repetition deeply imprinted in my memory. The first attack which I recollect of this malady came on me suddenly, as I was dressing myself a little before eight in the morning. I concluded it was from wind in the sigmoid flexure of the colon, and was not undeceived by its ceasing as suddenly as it came, after two hours duration. The next came on as I was sitting with my back very close to a large fire, which greatly incommoded me. It continued in a very slight degree for some weeks, producing symptoms, which, taking into connection the apparent cause, I mistook for lumbago, with which I had been twice confined to my bed, and from which I was then not able, by any peculiarities of sensation, to distinguish it. The pain got worse towards night, was relieved by lying down, but before morning was again aggravated, and was again relieved by rising. I observed no

peculiar change in my urine, and am astonished how I did not discover the nature of a complaint, which after the fatigues of a laborious day, made me dread going to what, with happier mortals, is usually a place of rest. To the manner in which this fit went off I paid no attention. Two or three years afterwards I had another attack of a similar kind, which came on suddenly while I was visiting a patient. It affected only the left loin and outside of the thigh; and though I was then tolerably well acquainted, from personal experience, with the symptoms of urinary calculus, I had no conception that the complaint was any other than lumbago, till I passed bloody urine a few hours afterwards, and eventually a small calculus. On various occasions I felt uneasy irritations, and pricking sensations about the anus, which made exercise in a carriage or in walking extremely uneasy, and perhaps I might have had some pungent uneasiness in making water, but still I attributed the whole to the alimentary canal. My third serious attack was first felt in the left groin shooting across the bowels, where it continued with excessive violence for twelve hours, accompanied with great soreness of the belly, frequent disposition to make small quantities of pale urine, but wholly without sickness. It was relieved by glysters and purgatives, after seventy drops of Laudanum by the mouth, and as much in the form of a glyster, had altogether failed; and like my first paroxysm, passed in my opinion, and that of a physician who kindly attended me, for an affection of the colon. It continued to recur more or less

every day for two or three weeks, but never very violently, or ever exciting in my mind any suspicion of its real nature, till one day, while in my carriage, I felt a grinding pain low down in the same loin, almost as low as to the side of the sacrum; soon after which, having an inclination to make water, I observed it to be tinged with blood. Then, for the first time, I saw, and comprehended, the nature of my preceding paroxysms. I continued for some weeks to have daily more or less of pain about the bowels and back, aggravated on motion, and usually passing water more or less discoloured with red or brown, which in a considerable degree separated and fell to the bottom of the urine on standing. During this period, I passed various small particles of stone or gravel, often without any considerable uneasiness in their passage through the ureter but smarting, and which excited an uneasy feeling, in various degrees, as they rushed through the urethra with the current of urine. The last of these, which caused a good deal of pain in the groin, was suddenly forced into the bladder, with immediate relief, by the violent jolting of a chaise and four, in which I was travelling to visit a distant patient. The next day the offending substance was evacuated. During these paroxysms I had no sickness.

I now took medicines of an appropriate kind, and remained a year free from complaint, when another violent paroxysm on the left side occurred, in which, after several hours of the most acute suffering, a fit of spontaneous vomiting drove the calculus in an instant into the bladder. Again I obtained imme-

ciate ease, and within forty-eight hours expelled this portion of calculus.

In the summer of 1806, I was a good deal engaged with the Supplement to my Essay on the Merino Breed of Sheep. This Supplement contained the result of thirteen or fourteen hundred microscopical measurements of different kinds of wool, all of which were made by candle-light, and therefore often kept me up till two o'clock in the morning. This fatigue, added to the constant stooping required by the process of observation, often gave me great pain in my loins, and across the belly, and produced red, brownish, or coffee-coloured urine. These circumstances indicated the existence of calculus, and I was not, therefore, surprised when, in October, I was seized with an attack which exceeded in duration and violence all which I had before experienced. This difference I probably owed in a considerable degree to my own aversion to the use of Laudanum, which usually making me vomit during the whole following day while my head was raised off my pillow, incapacitated me of course from visiting my patients. I remained, therefore, for sixteen hours without Laudanum, free from sickness, but cold and faint, and in a state of agony in the side and across the bowels which words cannot describe; till, at length, apprehensive that some fatal consequences might ensue, I employed the means which I shall hereafter describe, and obtained very speedy ease. The left side was in this instance affected. A few hours afterwards one or more rough calculi passed into the bladder, and in

the course of a day or two were evacuated by urine, with the usual pain about the neck of the bladder, anus, and urethra. While the gravel in these attacks was in the kidney or ureter, I had often a grating, and less commonly a stabbing, kind of uneasiness in the fore part of the middle of the thigh. In the height of that last described, there was a feeling as if the rectum and all the neighbouring parts were in a state of aching numbness from stricture; and I had no power of expelling a stool, or flatulency, or even urine itself. The largest of the calculi which now passed, much exceeded in size any which had before been generated.

The symptoms which I have mentioned include nearly all the particulars which commonly occur during what are called fits of the stone, or when gravel passes from the kidney. In other cases there are, however, variations. In males there is sometimes more feeling of retraction in the testicle, and in both sexes more of vomiting than I ever experienced.

Neither is it to be understood that every fit of pain is followed by the actual evacuation of gravel, even from the kidney itself. In many instances, pain is felt in various degrees about one or both loins or hips, or across the belly, nay, sometimes shoots down into the bladder, so as to lead to the suspicion that the calculus has reached the bladder, while the urine is very pale, reddish, of a coffee or porter colour, or even tinged with florid blood; and yet, either spontaneously, or from the use of opiates, the pain and other symptoms cease, and no calculus is evacuated. It seems as if

in such cases the stone, after having entered into the ureter, returned back into the pelvis of the kidney, and resumed a quiescent state. While so situated, it seems, as I have before observed on many occasions, for a long while together, to produce little or no sensible effects. Persons will walk or ride without acknowledging any uneasiness, or experiencing any thing morbid in the secretion or evacuation of the urine. From these circumstances unskilful practitioners are often deceived. I have seen several cases of this kind, of which I will particularize two.

A lady, Mrs. O., had a most violent fit of pain, which she described as being across the loins and in her bowels. It was attributed to various causes, not one of which was the true one; and after many hours went off very suddenly, leaving soreness in the parts affected. Some months elapsed without another attack. At last one occurred at Bath, when she sent to me. I had myself suffered too much not to be tolerably certain that the disorder was gravel; but another physician was consulted, who, from his own personal experience, also, immediately confirmed my prognostic. Suitable remedies were employed, and the patient soon obtained ease. But though the most careful examination of the urine was made, no calculus was discovered. The lady now became sceptical as to the nature of the malady; but after several weeks of ease, and slight subsequent suffering, happily obtained a removal of her suspense by the passage of many small calculi.

Another lady, Mrs. R., was affected with violent

pain in the region of the right kidney, accompanied with sickness, and a discharge of urine mixed with florid blood. Opiates carried off the paroxysm. Fits of a similar kind continued to recur, with more or less variation and violence, for four or five years; but admitting of long intervals, during which she could often walk, ride in a carriage, or take any exercise, without producing pain, or any change whatever on the urine; neither did she during this time pass any urinary concretions. In the year 1806, there occurred a more violent paroxysm than usual, in which the pain about the neck of the bladder was so great, and returned so frequently, accompanied at the same time with a small ragged white sediment, though in pale urine, that I could not help suspecting a calculus was now lodged in that part. This apprehension having been frequently expressed, the patient was disposed to consent to a surgical examination, but preferred seeking elucidation at what was supposed to be the source of knowledge. The examination was made, no stone discovered in the bladder, and hints given that new means might perhaps be more beneficially adopted, in a case so obscure that its very nature might be easily mistaken. The patient returned to Bath, continuing these new measures, and I attended her no more, till, about a year afterwards, while I was in her house, in the act of visiting one of her servants, she desired my immediate attendance under great and peculiar sufferings. I found that on the 1st of August, after violent pain in the right loin and side of the bowels, accompanied

with coffee coloured urine, she had felt frequent bearing down in the neck of the bladder, with an extreme desire to go to stool as well as to make water, and great increase of these sensations after the urine had passed. These symptoms continued more or less till the 6th, when on a sudden she felt a more than usual call to pass urine, which stopped as suddenly, accompanied with a violent forcing and tearing pain. This pain arose from the distention of the urethra, at the extremity of which there appeared the small end of a calculus which was removed, not without great mechanical force.

The evacuation of the calculus in this case produced so much mechanical irritation of the parts through which it passed, that for one or two days a pain remained so similar in kind to the preceding, as to make the patient believe that another calculus, or more gravel, still remained to be expelled. By degrees, however, it subsided ; the apprehension of the patient ceased ; and health was permanently regained.

In the two cases which I have related, and especially the last, there can be no reasonable doubt that calculus had continued to exist in the kidney, notwithstanding its presence at certain periods was not indicated by any feelings expressed by the patient.

There is, indeed, still another reason why the cessation of pain, without the appearance of calculi or gravel in the urine, is no decisive proof of another origin of the symptoms. The pain arising during the passage of urinary calculi is very different in different cases. It may reasonably be supposed, that

it is in some degree proportioned to the size of the stone. Such a conclusion is true, but only within certain limits. A great deal more seems to depend on the form and surface of the substance to be evacuated. I have known a patient, Mrs. N., pass a great many calculi of the size of pease; from which, however, she experienced little comparative pain, because they were all very exactly round, and extremely smooth. In myself all the calculi have been composed of three or more minute rough particles concreted into irregular forms, and with the most jagged and irregular surfaces. Hence by tearing and wounding the parts as they have passed, they have given excruciating pain; and probably much greater than they would have done, even if they had been larger, provided their interstices had been smoothly filled up with additional calculous matter. I have, however, been often surprised to find that while a concretion no larger than two or three small pins' heads has given me the most agonizing pain, one of a larger size, and apparently of equal roughness, has entered the bladder unperceived in its passage. It is true that in males they rarely make their final exit without some pain: but the contrary often occurs in females, in whom the size, direction, and capacity of the urethra render the passage less difficult. It might, indeed, be presumed, that in the case of females they would be perceived in the urine, if they were evacuated. Here, however, there is a new deception. I have already remarked, that while calculus exists about the neck of the bladder, there is tenesmus,

or a disposition to go to stool ; and all who have ever been afflicted with this complaint, know that, in the particular attitude and action of fæcal evacuation, calculi most readily pass into the urethra, and are expelled at the same time, and in females insensibly, with the fæces. Mrs. O., a lady long subject to paroxysms of violent pain, which used to cease without any discovery of calculi, and therefore were attributed to other causes, appeared to me evidently labouring under that complaint. Her urine was often examined, without success; but on my requesting that an accurate scrutiny might be made into her stools, the surface of one of these was at length found to be covered with a great number of small calculous concretions. The symptoms of the case left little doubt in my mind that similar evacuations had often taken place before, equally without the knowledge of the patient.

There are two other diseases, for which urinary calculus is often mistaken ; one, spasmodic affections of the bowels ; and the other, rheumatism, and more especially lumbago.

With regard to the former, I know by experience, that, at certain periods, the quality of sensation in the two cases is absolutely not to be distinguished. The pain seems to be in the colon, sometimes about the sigmoid flexure, sometimes shooting across the navel, near the direction of the arch; often attended with vomiting; and at the same time the patients, as I have remarked above with regard to myself, fancy that a copious stool would immediately remove every complaint, and the ease which such an evacuation actually on some occasions produces,

confirms the fallacy. It is on account of this resemblance, that fits of the disease in question are often called Nephritic Colic. The urine is never attended to, or, if carelessly examined, is found to be very pale; an appearance deciding at once the existence of spasm. The symptoms, perhaps, arise from a very small calculus, which passed with only a slight pricking through the urethra. I have acknowledged how often myself, and other physicians, were thus mistaken in my own case; and I have known others in which, after many violent paroxysms of an unsuspected kind, the disorder turned out to be nephritic calculus.

There are, however, I think, marks, by attending to the quality and progress of which, the two cases may be very clearly distinguished.

In the first place, spasmodic colic in any considerable degree is comparatively a rare occurrence. When it exists, it may be often traced to some known causes, of which the chief are error in diet, and exposure to the effluvia of lead. It is usually attended with more decided vomiting, which at first is often foul, and is apt to return as often as any thing is swallowed, so that almost every thing, whether of food or medicine, is soon rejected. It comes on more by short fits than the pain of calculus. It occupies a more decided position, which is in the front of the belly, about the navel, both sides of which it equally affects, and is relieved by bending the body forwards, and increased by placing it in an erect position. Lastly, the discharge of wind always relieves it, appearing to remove

something from the part affected; and free motions wholly suspend it.

On the other hand, the irritation of calculus either comes on without known causes, or is preceded by those circumstances which will be hereafter mentioned. It is often unattended with vomiting, which, when it exists, seems to be accidental, and to bear little relation to the nature or quantity of the contents of the stomach. When the pain shoots across the bowels, it is usually slight; and, in this case, it is more diffused, and especially is felt at the same time in the loins. When more violent, it is chiefly before or about the hip, or is felt on one side of the belly, shooting downwards transversely from the fore part of the hip to the groin. At the same time a darting or grating pain is often perceived in the fore part of the thigh on the same side. If the fit affects both kidneys at once, then the pain is felt on both sides, in the manner last described. It is little disposed to observe any sudden exacerbations and remissions; but continues, throughout the greatest part of the paroxysm, in one uniform unvaried state. It is aggravated by bending the body forwards, and more especially by lying on the opposite side; and perhaps a little, though but little, relieved by lying on the back with the body moderately straight, and somewhat turned to the side affected. It obtains little or no immediate alleviation either from the discharge of flatulency or fæces, neither of which appears, as in the case of colic, to come from the affected part. To these distinctions we may add, that, in the nephritic calculus, we may

always observe, during the course of the fit, some deviation from the natural state of the urine, which is either very pale and copious, high coloured and small in quantity, tinged in various degrees with brown from the slightest to that of coffee, or mixed with various shades of red from the addition of fresh blood. In all these cases the colouring matter separates in a considerable degree on standing, and falls to the bottom of the vessel containing the urine. If any farther evidence is wanted as to the existence of nephritic calculus, it may in some cases be obtained from the patient having been known to evacuate gravel in former attacks of a similar kind. Such evidence is, however, unnecessary, when the symptoms which I have described occur during the progress of the fit ; and it is obvious that it cannot be obtained, if the fit happens to be the first.

From the sciatica and lumbago, nephritic calculus may be distinguished by the seat of the pain ; which, in the first, begins about the sacrum and hip joint behind the great trochanter of the thigh ; and when it extends downwards, takes a course on the outside of the thigh to the knee ; and which, in the second, occupies one or both sides of the loins near the spine, shooting not into the groin, but down the outside of each hip. In these cases little or no pain is felt, as long as the patient is at rest in certain postures ; whereas the least movement of the parts produces great suffering, which immediately ceases, when they are again placed in a state of relaxation and rest. On the other hand, the pain of nephritic calculus is,

during the fit, exquisitely great, while the patient is at rest in any posture, and is comparatively little aggravated by moderate motion of the body. Further evidence of the difference has been already given under the last head, which particularizes the positive circumstances of suffering, and other symptoms, in the disease before us.

There is another disorder said closely to simulate nephritic paroxysms, which I should not have thought it necessary to particularize, had it not been adduced by the illustrious Sydenham. I allude to the *Hysteria*, of which that author observes, “*Quandoque hoc*
 “*malum in alterutrum ex renibus incursans, atro-*
 “*cissimo quem illic parit dolore, paroxysmum nephri-*
 “*ticum omnino mentitur, idque non solum doloris*
 “*genere locoque quo sævit, sed et adscitis vomitionibus*
 “*immanioribus, tum etiam nonnunquam ex eo quod*
 “*dolor per ureterum ductus propagitur. Ita ut ægrè*
 “*admodum dignosci queat, utrum hæc symptomata ab*
 “*incluso calculo, an vero ab effectu aliquo hysterico*
 “*enascantur, nisi forte casus aliquis acerbior ægre*
 “*animum paulo antequam corriperetur discrucians,*
 “*aut materiæ viridis per vomitum rejectio symptomata*
 “*ista affectioni potius hystericæ quam calculosæ*
 “*tribuenda esse docuerint.*”—*Syd. Op. 4to. Genev.*
tom. i. p. 410.

Notwithstanding the great authority which I quote, I cannot, without some hesitation, assent to the truth of the doctrine contained in the preceding paragraph. I doubt whether *Hysteria* ever appeared in the form of a nephritic paroxysm; but I know from experi-

ence, that where a stone already exists in the kidney, the vomiting or other circumstances of agitation which constitute an hysteric fit, whether excited by bodily or mental causes, may urge such a calculus into the ureter, and so excite a real fit of gravel: and conversely, I have seen an instance, in which every attack of nephritic calculus produced strong fits of hysteria. In both cases the calculus truly existed, and its passage was connected with the hysteria merely as an accidental cause or effect.

Nephritic calculus is seldom accompanied with fever; the pulse is usually slow and weak; and the urine is free from lateritious sediment. There is, however, one modification of nephritic affection, which I have occasionally seen, and which may raise considerable doubt as to the nature of its cause. A patient is seized with violent pain about the loins and side of the belly, suffering no material variation from any posture, and accompanied with vomiting or sickness; obtains little or no relief from purging; has great heat on the skin; a tendency to sweating; a strong, full, and quick pulse; and passes flame-coloured urine, depositing a copious lateritious or farinaceous sediment. These symptoms indicate inflammation of the kidney or ureter; and the acuteness of pain renders it highly probable that they are produced by the passage of calculus. The distinction is, however, of no great importance, the practical treatment being obviously such as is applicable to other cases of local inflammation.

I have been the more particular in my inquiry into

those symptoms which distinguish the passage of urinary calculus, because there is scarcely any disease which so often deceives, and therefore disgraces, the professors of the healing art.

When a stone has passed out of the bladder, it sometimes happens, in men, that it is arrested in its progress and remains in the canal, where it produces considerable uneasiness, and whence it cannot be expelled by any projectile force of the urine. Hence a suppression of urine follows, and life is speedily endangered. In such cases, stones have been occasionally removed by the use of forceps introduced into the urethra, but others have required to be cut out of the urethra.

This latter operation has, so far as I know, never been practised on women, in whom the form and shortness of the canal, and perhaps its greater size and capacity of dilatation, facilitate the passage of comparatively large calculi. Hence women are much less liable to stone in the bladder than men. They readily pass, soon after they exist there; while in men they often remain, and enlarge by successive depositions of similar matter from the urine, so as to be no longer capable of removal without excision from the bladder. In this state, which is usually called stone in the bladder, the disease is more immediately within the province of surgery. Its existence is for the most part discoverable by pain or irritation about the neck of the bladder, producing more or less of unusual disposition to make water, though only a small quantity is in the bladder. The evacuation does not remove

the inclination, and towards the conclusion, as I have before remarked, increases for some time the uneasiness of the part. A similar uneasiness is also produced, or increased, by the exercise of walking, or riding in a carriage. In pure cases of this kind, the urine is capable of being thrown out in a full stream, but sometimes stops suddenly from the mechanical obstruction of the urethra by the stone. It is usually of a paler colour than natural, and after the disease has subsisted for some time, is mostly turbid and milky, from the admixture of more or less of mucus, which, on standing, separates and falls to the bottom of the vessel. Sometimes, also, it contains a few small specks or fibres of white coagulated lymph, or even blood. To these symptoms may be added, the uneasy pressure about the rectum before described, producing a disposition to go to stool, often when there is nothing to evacuate, and never much relieved when evacuation has really occurred.

From the example of Mrs. R., which I have described above, as well as from my own personal experience, I know that a part of these feelings will arise from calculus only in the kidney, propagating such sensations downwards to the neck of the bladder. But in this case the symptoms in the bladder will be connected with those of stone in the kidney or ureter; besides which, these will be only transitory, and will cease entirely without the evacuation of calculus, while those of the kidney or ureter will occasionally return.

It is more difficult to distinguish the symptoms of stone in the bladder from those which arise from

disorders of the bladder itself, or the neighbouring parts; and this difficulty will be much increased, where such disorders are complicated with calculus. If the urine cannot be ejected in a stream of the natural size and direction, we may judge that some malady exists in the prostate gland or passages. At any time such maladies require, in order to ascertain them, the aid of surgical examination; but if with them there should be an uneasy propensity to discharge the urine before the natural quantity is collected together, with a mixture of tenesmus, which, with the propensity to make water, shall be greatly increased by exercise, and not relieved by the evacuation; while, at the same time, there is neither fever, uniform tendency to emaciation, or purulent discharge in the urine; we may judge it probable that there is calculus in the bladder. This conclusion will approach nearly to certainty, if antecedently to these symptoms in the bladder, there existed the characteristic marks of calculus in the kidney or ureter. As, however, causes existing about the neck of the bladder may irritate the rectum, so the former part may in its turn suffer from diseases of the latter. In such cases, therefore, it is always necessary to enquire by the usual examination of the *fæces*, and of the rectum itself, whether it suffers any deviation from the state of health, to which all or any part of the symptoms may with justice be attributed. Such deviations are, piles, scirrhusity, inflammation, ulceration. All of these have, however, their several and well-known concomitant symptoms, according to the degree and

nature of which we must judge whether they can produce the affections of the urinary organs before described.

Other cases still exist, of a nature perhaps still more perplexing. Mrs. S., a lady under the middle age, of an irritable habit, the mother of several children, laboured under a fever apparently connected with the state of the alimentary canal. After some pretty active purging, which removed the febrile symptoms, she was suddenly seized with a violent forcing pain about the pubes, shooting through to the sacrum, and producing at once a disposition to stool and to urine. The stools were loose, and the urine deposited a white mucous sediment. The complaint, after many days, slowly, and, as it were, reluctantly, yielded to the successive administration of various forms of aperients and anodynes, without exhibiting one feature by which either its nature or seat could be precisely ascertained.

Another source of uncertainty is, in females, certain affections of the uterus, which is liable to various maladies, calling into action the bladder and rectum. The distinctions in such cases will be better understood, when we come to consider the diseases of that organ.

Proof of Animal Action and Sensation in Ureter.—It may be adduced as a proof that a stone passing through the ureter is not propelled by a mere mechanical operation, that in persons who have the gout in such a way as not to prevent those actions which usually produce pain, as when slightly in the feet, or when

only in the hands, so as to be able to continue their exercise, passing does not occur ; but it does occur, with the usual pain, in the intervals between the gouty paroxysms. This is equally the case, though there is no fever, and the urine is secreted in its usually large quantity, and of a limpid colour. So, also, as long as the gout continues, the usual motion of a carriage, which before and after the fit excites great pain, no longer does so. Hence it is evident, that gouty fits suspend some sensation and some action, of an animal and not mechanical kind, which often takes place at other times, for salutary purposes.

On Pain in the Kidney and Ureter.—These parts, according to Haller, are in health insensible ; but he explains the pain produced by the passage of calculus in the ureter, from a sympathetic effect on the muscles.

In colic, certainly, the abdominal muscles are retracted vehemently ; in the toothach it is difficult to know by the feelings, whether the upper or lower jaw is affected ; and in the gravel on one side, both sides almost equally suffer.

The cases, however, are widely different. In the toothach, the part affected can readily be distinguished by the greater degree of uneasiness which it feels on being touched ; and in the gravel, the pain of the side is most increased by pressure or motion of the part. In the colic, also, there is an affection, and a very painful one, of the bowel itself ; so that there the sympathy of motion is with a part which is actually allowed to feel.

I do not, therefore, see how one can from analogy refer the pain of stone to any sympathy in the muscles, especially as pressure on the loin or side must be very hard, in order to increase the pain, and as the same effect will be produced by hardened fæces, which seems to imply that the pressure, in order to be effectual, must take place on the part in contact with the gravel itself.

There is, however, still another theory, which refers the pain to the psoas or internal iliac muscles, and which merely supposes an actual mechanical irritation by the stone pressing on those muscles, or the nerves supplying them, as it passes on in the ureter. This opinion derives more weight from the great resemblance which there is between the pain of passing calculus, and that of lumbago, in which the belly suffers alike : there is, however, this difference, that in the calculus, instead of shooting into the hip, the pain often affects the fore part of the thigh, and also the scrotum, which seems to argue an affection of the bladder at least, and therefore implies either sensibility or oscillatory irritability. Besides which, passing calculus, even when very high up, often produces sickness, and even vomiting, which lumbago and psoas abscess do not, except accidentally.

SYPHILIS.

Some Observations on Syphilis.

I have seen more than one case of eruptive diseases in married females, which appeared to me evidently the effect of venereal infection ; and which was cured immediately by the internal use of Quicksilver. Now I am clear, that, in these cases, there was no suspicion on the part of the female of any venereal infection. I have not found females much disposed to hide such misfortunes, when they really exist ; and on the contrary, married females have on various occasions applied to me, miserable under apprehension of them, when they did not exist ; and in the instances to which I allude, concealment was useless, injurious, and, from other circumstances, improbable. Now I do not know how any local disease in or about the pudenda, so as to affect the constitution, could have subsisted there without the knowledge of the female ; or if it had there subsisted, how it could have got well without the use of some means, none of which had been in these cases applied.

This difficulty is of no easy solution. As however we find, that, in men, buboes will sometimes arise without chancres, and chancres often exist without producing buboes, the constitution being sometimes in both cases equally affected with syphilis, is it not possible, especially in females, in whom the membranes of the genitals appear to be considerably less irritable than in males, that the constitutional affection may take place from the contact of the proper matter, without producing either chancre or bubo?

In reality, common as syphilis is, our present knowledge on this subject appears to me extremely defective. Patients are continually coming to me in private practice, with sore throats and eruptions; and both to myself, and to the General Hospital of this city, for inflammatory affections of the extremities, in which a venereal origin appears to have not been suspected, and in others is absolutely denied; and which, nevertheless, get well from the use of mercury, and that only. In order to be more particular, it will be necessary to describe some cases.

A Noble Earl had frequent attacks of ulceration in his throat, which was unaccompanied with eruptions or pains in his head or limbs. The ulcers were clean, superficial, but indisposed to heal, and therefore of long duration. His constitution was what is called irritable; and considerably weakened by late hours, and exertions to which it was not fully competent. Venereal affection had existed; but it was said that these ulcerations were not venereal; and that they must be treated in another way, which should

strengthen the relaxed habit. Bark was therefore given, and the ulcers healed. But they again from time to time returned ; and were again temporarily removed or mitigated by the same process. A mercurial course was at length adopted, and the patient recovered, and had no relapse.

Several other persons, from youth to middle age, after a considerable interval of freedom from all syphilitic symptoms, in cases treated with mercury, have had inflammatory swellings of the shoulders, the elbows, the wrists, and the ankles, the pains of which have been acutely increased in bed, and which, though slightly relieved by the common processes of leeching or blistering, have never recovered, but have been from time to time violently aggravated. Some of these persons have had headachs, others deep cutaneous, and even muscular, wounds ; a few, neither one nor the other ; some have had fever, others none.

All those whom I have ever attended under such circumstances, except one, have got well under the use of Mercury ; though, in two or three instances, relapses have taken place, as is sufficiently known to happen, where the venereal nature of the symptoms is unequivocally acknowledged.

Some of these cases had been for many months considered as cases of acute rheumatism, or rheumatic gout. A young gentleman, so circumstanced, came to Bath, labouring under violently painful inflammatory swellings of various joints, sleeplessness, a pulse of 130 in a minute, with night sweats, total loss of appetite, and great emaciation and weakness ; and

what was somewhat singular, a discharge of pale urine to the amount of several quarts each night. These complaints had continued with increasing vehemence for twelve months. Fortunately, in a few days after the commencement of my attendance, a painful node began to appear on his skin, which led me to attempt a cautious use of Mercury in form of Calomel, with an equal quantity of Sulphur. Antim. præcip. From the exhibition of this medicine, to the extent of only a grain of each twice a day, within ten days the pulse was reduced to 70 in a minute; the night sweats and profuse evacuation of urine disappeared; and he obtained sleep and exemption from pain. By degrees his appetite returned; the swellings vanished; and in less than a month from the beginning of the course, he had no single complaint, but a certain degree of thinness and weakness. His mouth was only slightly affected. A year or two afterwards I saw him fat and in perfect health, when he told me that, subsequently to my attendance, a piece of one of the bones of his nostril had come away, but that the part healed of itself.

A British Officer, who had distinguished himself by his gallantry on a great theatre, and who now wears the ensigns of honour justly merited, had been a full year affected with inflammatory swellings of the wrists and other joints, together with violent pain in his head, all increased at night, and accompanied with considerable fever, little emaciation, and no sore throat, eruption, or pains in the middle of the bones. I employed for him the usual remedies, from which

he obtained slight relief. In about ten days a painful swelling appeared on the skin. Then, and not before, recourse was had to mercurial frictions, which in a few weeks removed all his complaints.

Were these cases venereal? If they were, they surely were not less so before the swellings appeared in the skin than after; and yet, when such characteristics had not appeared, the disease was said not to be venereal, but rheumatic.

A young gentleman, Mr. H., labouring under a sore throat, and some suspicious, though by no means certain, symptoms of a more recent local infection, began the use of mercurial frictions. In a few days a painful node was discovered on the os frontis. The throat was fumigated with Cinnabar, and as he was in a considerably debilitated state, bark was liberally given him. During this course he went out, and at various times imprudently exposed himself to the cold air. He was nearly recovered, when it was suggested to him that the affection of his throat was not venereal. This destroyed his confidence in his former physician, who, however, continued his measures merely till the symptoms were entirely removed, and the patient was restored to vigorous health. When the mercury was discontinued, the bark was given in augmented doses. At the end of a fortnight, the soreness of the throat returned; and the physician, satisfied that a sufficient perseverance in the first measures would have produced a radical cure, and indignant at the want of confidence which was shewn towards him, refused to begin anew. Other counsel,

frequent, grave, and celebrated, was obtained; and it was decided that the complaint had never been venereal. Nay, it was asserted that the mercury, during the use of which the patient's complaint had vanished, and his constitution had been invigorated, had been infinitely and unspeakably injurious to him. The patient long languished; but at length recovered. If the recovery was not due to mercury, the gentlemen who treated him owe it to mankind; or if it was given, they owe it to themselves, to publish the process of cure.

In these and many other similar cases, there seem to be two points which demand our attention:

1st. What are the specific symptoms of the venereal disease? Are nodes, scabs, producing loss of substance in the cutis, and even in the muscles, eating ulcerations of the tonsils in persons otherwise apparently healthy, with or without inflammatory affections of the joints, are these, when they occur after local venereal affection, to be considered as such? It appears that, conformably to the present prevailing system, they are not. Sometimes they are called scrofula, and at other times rheumatic; and it is supposed that in such cases either the disease, or the remedies, have produced this scrofula or the rheumatism, after the original venereal affection has altogether vanished. Where then are the painful nodes, the deep cutaneous or muscular ulcerations, the long and remediless sore throats, and the absolutely unyielding and indefinable articular inflammations, which occur to persons who have never had the venereal disease,

or to those who from the use of Mercury have suffered long salivation for the cure of congestions of the liver and other local maladies? By me, during a practice of more than thirty years, they have never been seen; while, after syphilis, they are subjects of daily observation. And who, I would ask, will assert that the latter precisely resemble the former, either in the nature, order, and progress of symptoms, or in their capacity of yielding to certain processes of cure.

What, then, shall we say? that they are peculiar species of the several genera, produced either by the specific action of the venereal condition, or of the remedies operating on that condition? In that case, then, there must be a specific effect after the specific cause no longer exists. An assumption not less gratuitous than subtle! Where are the evidences of its truth? Shall we look for them in the operation of remedies? This is the second point, and certainly the most important, to which we ought to direct our attention. If it be said that they are not venereal symptoms, because Mercury will not cure them; I might with equal reason answer, Mercury will cure them, and therefore they are venereal.

In neither respect, however, would the conclusion be legitimate. There is no remedy which will infallibly cure any disease. I have seen and related the case of a gentleman who died of a tertian ague, notwithstanding the use of the best Bark. The itch is not always curable by sulphur; and I have known a man, constantly engaged in his business of a black-

smith, and in no very deranged state of health, whom, though unaccustomed to that remedy, twelve or fourteen grains of chrystallized Emetic Tartar would not vomit. In reality, the same preparation of a particular remedy will not always agree with, or act on, every patient.

A Gentleman of middle age had laboured for nearly a year under a membranous headach, with somewhat thickened periosteum, so violent, that nothing relieved him but several hundred drops of Laudanum taken every day. Some years before he had had a syphilis, of which he was apparently cured by Mercury, and had no subsequent new infection previously to the commencement of this dreadful headach, which absolutely rendered his life a burden to him. The symptoms were such as appeared to me to indicate a venereal origin; but then he had, besides the first mercurial course, actually undergone two copious salivations, of at least six weeks each, for this very disease, and altogether without relief. He was cupped, leeches, blistered, fomented with hot and cold water, rubbed, took all sorts of medicines with every indication, and had, at last, a long incision made through the scalp down to the cranium, all with no better effect. This plan I was concerned in administering. He left Bath in despair; when at length some gentleman, of more acute discrimination, administered the strong Muriate of Quicksilver, and the patient, to the just credit of his medical adviser, soon recovered. Many other cases I have myself treated, in which symptoms, acknowledged to be secondary ones

of syphilis, have readily yielded to the internal use of the Nitrate or Muriate of Quicksilver, after having resisted the gross form of mechanical subdivision.

I have some reason, also, to believe that the Nitric Acid owes its anti-syphilitic effects chiefly to its giving a new and more powerful agency to what still remains of Mercury in the constitution. A Lady to whom, for a liver complaint, I had administered Mercury, began soon to have some soreness of her gums, followed by slight salivation. When the affection of the mouth first began, I ordered her to omit the Mercury, which was never again applied in any form. The Mercurial spitting continued for three weeks, and then left her. After she had been wholly free from it for a fortnight, she took Nitric Acid, from which, in about three days, the spitting returned violently, and though she immediately desisted from the use of the Nitric Acid, continued for a fortnight more violently than ever. In this case the spitting resembled in no degree that which arises from the same remedy in patients who have not taken Mercury; and as the Acid seems to have little specific power of eradicating the venereal disease, except after the exhibition of that remedy, it appears to me highly probable that it owes its effects to the operation which I have before suggested.

Pseudo Syphilis, as it is called.—Nov. 4, 1810. Mr. J., aged thirty, six years ago had a venereal chancre on the glans penis, three weeks after a supposed infection, attended with running from the urethra, and ardor urinæ. The chancre was destroyed by Escarotics, and was followed by no bubo. He

took Mercurials, but did not rub in, till his mouth was sore ; spit little ; and cannot recollect how long he continued the course.

He was well in every respect till last March twelve-month, when, without any new infection, he began to have a pain in the back part of his head, extending afterwards to his forehead, accompanied with pain in his eyes, and almost incapacity of vision. This state was attributed to cold ; and, he believes, was accompanied with fever. He put himself then under the care of Dr. Babington, who relieved him by cupping, &c., in about ten days. He does not remember that there was any swelling or night aggravation. He left Dr. B., and, under the care of an apothecary, continued remedies, during which he was affected with breaking out of large blotches with yellow heads, which left deep holes, which scabbed over ; some were as large as a sixpence, in his back, arms, legs, and face.

In this state he consulted Mr. A. Cooper, he thinks last April twelve-month, who gave him strengthening things, which in a fortnight so restored him, as to enable him to begin a course of Mercury. Accordingly he rubbed in twice a day for thirty-five days. His mouth became affected in somewhat less than three weeks, and was sore, but did not suffer salivation more than a pint a day. Before this had begun, the sores were mended, and got quite well, from his face and elsewhere ; and the wounds healed, before the course was finished. The mouth continued very sore for three weeks.

After this, he took a tour through the West of

England, and continued well for six weeks ; when pimples began to appear on the face, with inflamed, suppurating heads, accompanied with pain over the forehead, and nodes on the head, chiefly the crown. His health was at this time in other respects good.

Mr. Cooper then gave him fresh pills, which he supposes to have been Mercurial ; and he rubbed in again for about ten days, twice a day. His mouth became again slightly sore, with little spitting, which remained only a few days ; but during this course the nodes and eruptions went away. This was in September twelve-month.

He then went into the North of England for a fortnight, when the eruption and nodes came on again, with the most excruciating pain in the head, so as to prevent him from rest both night and day, accompanied with fever and emaciation. Common remedies had little or no effect on him ; and he went again, early in October, to Mr. A. Cooper.

He ordered him to rub in again twice a day for ten or twelve days, so as slightly to affect the mouth, during which all the symptoms again left him.

Early in November he went to sea, but had not been there more than ten or twelve days, when the skin became again affected in a smaller degree, and large nodes appeared on both shins, accompanied with severe pain and tenderness to the touch, greatly aggravated while in bed. He then rubbed in for a week on board, so as not to affect the mouth, but to take away the pain, and remove the eruptions, and to diminish, but not altogether cure, the nodes.

He then went to Cadiz, where he remained about a fortnight; and the pains returning in his legs, with some eruptions, he applied to Dr. Fyfe. In consequence of his advice, Mr. J. rubbed in twenty-seven days, twice a day, which produced great soreness of mouth, but still with little spitting; but from the extreme heat of the weather, he sweated a great deal.

Again the pains and eruptions were removed; but the nodes on the shins did not subside.

In February he went on board and sailed to Buenos Ayres, where he suffered shipwreck in the Rio de la Plata, on the 17th day after leaving off Mereury; and was exposed to wet, fatigue, cold, and almost privation of food, for several days.

In about a fortnight after, the pains in his head had recurred in so violent a degree as almost to deprive him of reason, without any swelling that he recollects. For seventeen days he kept his bed, during which he was vomited, purged, and blistered; and mended, but remained a considerable time in a weak state.

At the end of a month, when he was recovered from this attack, his legs began to swell and prick about the ankles.

This was about the end of February last. The nodes on the shins were then extremely painful, and his fingers also were sore; and a node appeared on the middle of one of his ribs on each side. He took Mercurial pills under the care of a physician, and used occasional plasters on his legs; but did not use Mercurial oint-

ment. A little soreness came on in the gums, and the pains went away, the nodes also disappeared on the ribs, but not on the shins. At the end of a month he left off medicines; and continued tolerably well for a fortnight; when the pain of the legs returned, with increase of swelling in the ankles, and pain and swelling in the knees and fingers, at the joints.

This continued during his voyage home in June, fifty-seven days, taking nothing but Opium, for the purpose of relieving the excruciating pains. During the passage he began to discharge blood by stool, but without griping or much purging, though with the same sense of pain about the anus, unattended with piles. I find that, towards the end of the voyage, he took, in about a fortnight, about thirty Calomel pills, (gr. xxx.) from which he found his pains relieved, though his mouth did not become sore. He was very weak and lame, and without appetite during the passage, and his pains were much aggravated at night.

He arrived at London the 6th August; and on the 7th, went to Mr. A. C. again, who, ordered him a warm bath for a fortnight, and then ordered him to rub in, night and morning, which he did for five weeks. His mouth became very sore, and is now scarcely well, though he had very little spitting. He got free from all complaints, except the nodes in the shins; but for three weeks they have begun to return in the legs, and in the side and back of the head; which is tender, as are also the elbows and hands, which, however, are all much better since he

left London, ten days ago. He has taken no medicine, nor rubbed in, for nearly a fortnight past.

Pulse 72. Appetite better. Sleeps well. Nodes continue very large round the upper part of the tibia, and are in some degree sore to the touch. Has discharged no blood by stool for the last ten days. Right eye inflamed for the last eighteen months.

Baln. tepid. grad. xciii. cras nocte h. s.

R Sulphuris præcip. 3ss.

Syrupi Zingib. 3ss.

Aquæ Rosæ 3x. M. Sum' horâ somni et primo mane per biduum.

There are now on his skin, chiefly of the arms, a great number of minute papulæ, slightly red, and very itchy, which he scratches very much.

Nov. 9. Eye much the same. Itching rather worse. Two motions, rather looser, daily, without blood. Very little pain any where.—Baln. cras; et Haust. u. a.

Nov. 16. Has bathed regularly. No discharge of blood by stools, and bowels open twice or thrice a day, loose; but to-day no stool. Eye better. Has had zinc ointment applied to the eruption, which is nearly gone. For four or five days has had pain and soreness of the right breast, among the ribs. Pulse 92, and full. Skin hot and moist.—V. S. ad 3ix. Haust. u. a.

Nov. 17. Pulse 84, and very full and strong. Skin hot and moist. Blood covered with a very thick, strong, and rather cupped crust of coagulated lymph, and throughout tenacious, with coagulum large in proportion to the serum. One stool rather loose

daily ; but without blood. Side and breast a little better, not increased by heat of bed. Shins greatly reduced in size.

R Potass. Citrat. \mathfrak{z} ss. Aq. \mathfrak{z} vi. Syr. Ros. \mathfrak{z} ss.
Vin. A. Tart. g^{ss} xv. Sulph. præcip. \mathfrak{z} ss.
primo mane et h. s. per trid.

Let him avoid wine, and eat little animal food.

Nov. 19. Pulse 80, and soft, and natural. Skin cool. No stool to-day. Very little pain of any kind.—Haustum sumat ut antea, cum Sulph. \mathfrak{g} ij. in singulis.

Nov. 21. Pulse 76, and full. Bowels open once or twice each day, tolerably free from pain.—Pergat.

Nov. 23. Pulse 72, and soft. Bowels rather purged, with some griping pain. Side tolerably well. Two very good nights. A little hard rising on the os occipitis, rather tender on pressure for two or three days. Has continued to avoid wine, and to eat very little meat. Little or no eruption.—Sumat Sulph. præcip. \mathfrak{g} j. bis die cum Vin. A. t. g^{ss} xii.

Nov. 25. Pulse 80, and rather full. Pain in side somewhat aggravated, but chiefly on moving the arm ; not aggravated in bed. Slept well in the night. Bowels rather loose. Urine less high.—V. S. ad \mathfrak{z} vii. Haust. u. a.

Nov. 26. Pulse softer. Blood very tough throughout, and with a very thick crust of coagulated lymph. Bowels open, side much as before.—Empl. Lyttæ.

Nov. 27. Blister drew well. Pains less. Pulse 90. No stool.—Pergat.

About the 30th, he left Bath without fever, and

with no complaint, but occasional pains about him ; appetite good ; pulse natural. Sleep good.

Gonorrhea Dormientium.—All the patients who have consulted me with regard to this complaint, have been of plethoric habits, and liable to those disorders which are usually called nervous.

Such persons when acted on by one or other of the causes which I am about to mention, are affected by a libidinous dream, very speedily followed by an emission of semen, which awakens them and enables them to recal to memory the circumstances of the dream. It is not always, however, that the emission rouses them from sleep, and then the dream which excited it is lost ; though not in every instance irrecoverably. For on this, as on other occasions of dreaming, of which we have a very obscure, or even no recollection, accidental association will sometimes very suddenly bring back to the mind the whole train of thought. Hence it appears highly probable that the *Gonorrhea Dormientium* is always preceded by a corresponding dream.

Emissions of this kind generally occur but once during the course of several nights ; but they sometimes take place in the same night, once, twice, or even oftener, and some patients are thus affected almost every night for weeks, and even months, in succession.

These emissions seem to owe their origin to certain dreams. The following causes I have observed to produce such dreams.

1st. Libidinous ideas excited during the day, and especially not long before sleep, by loose books or

conversation, and by such actions as are usually the prelude to emissions. Ideas similar to these, as all others of an active kind, very readily excite vivid pictures of themselves during sleep ; and interrupt it by dreaming.

2dly. Those causes which have a tendency to quicken the circulation, such as heat, arising from fire in the chamber, and much covering of the bed ; stimulating food and drink, such as spices, essential oils, fermented liquors, and ardent spirits.

3dly. Those causes which act as stimuli to the neighbourhood of the organs more immediately concerned ; such are, (A) heat applied to the back and loins. Thus it generally happens that persons waked by the emissions, find themselves lying on their backs. (B) Stimuli to the urinary passages, and more particularly, I believe, the neck of the bladder, either by the specific qualities of the urine, or by mere distention. I have known one instance in which Vitriolic Æther taken internally, especially in the afternoon, almost infallibly produced attacks of this disorder. I have known it, also, frequently happen from large draughts even of water, or the mildest fluid taken at night. Every one is aware of the effect of distention of the bladder in producing erections of the penis, which subside when the bladder is emptied. (C) Stimuli to the rectum, or perhaps the lower part of the colon. This often occurs from the mere circumstance of costiveness. A Gentleman, of a plethoric habit, accustomed to a regular motion just before going to bed, was nine times out of ten affected with

a seminal emission, if he failed of that motion. Another was extremely liable to the same disorder, whenever he took an Aloëtic Aperient ; and it sometimes arises from the irritation of acrid fæces. I have also known it occur, whether from the heat or fulness of the alimentary canal produced by eating suppers, in a person unaccustomed to that meal.

(D) I think, also, that riding on horseback, or taking long journies even in a carriage, has often produced this complaint. It is easy to see how these causes, by stimulating the levatores ani, and accelerator urinæ, may excite in those muscles the spasmodic contractions which evacuate the semen.

It may be repeated, with regard to all these causes, that their operation in producing this disorder is more certain, in proportion as it concurs with the usual hours of sleep ; and therefore libidinous ideas, stimulating food and liquors, full meals, large draughts of liquor, costiveness, and Aloëtic purges, are most apt to produce it when they have been applied at night.

This view of the remote causes suggests the means which are expedient for the prevention of the disease.

It is evident that the first step to be had recourse to, is the avoiding of the remote causes. As these have been already specified, it will be unnecessary to repeat the greater number of them ; but a few may be more particularly mentioned. One patient to whom I hinted, that emissions were excited by lying on the back, employed the expedient of confining himself in his bed to one side, by the use of ligatures, and in this manner, for a considerable time, escaped the disease.

It will often, however, be sufficient, if care is taken to avoid going to sleep on the back ; and the patient should lie as thinly clad as possible, and either on a flock bed or mattress. The diminution of that local heat, which proves a stimulus to the levatores ani, and accelerator urinæ, may also be effected, either by general cold bathing, or cold water topically applied, before going to bed. A full habit of body may be removed by uniform exercise of walking, by avoiding full meals, by living as much as possible on a vegetable diet, and perhaps, by blood-letting. Costiveness should carefully be obviated by cooling aperients of the saline kind. But the method which I have found most effectual in this respect, and which entirely cured a case already mentioned, in which the emission clearly arose from irritation about the rectum, is the use of water glysters. From half a pint to a pint of tepid water was injected by the patient himself into the rectum, by means of a bag of Cahoutchuc. In a few minutes the water was rejected with more or less of fæces, all irritation subsided, and the patient passed an excellent night, free from the disorder. He continued this measure, whenever he missed his evening motion, for some months, with almost infallible success ; and to the present period, which is now several years, has scarcely had any returns of the disorder. The same measure succeeded in preventing nocturnal emissions, when they arose from the stimulus of acrid fæces, or Aloëtic purgatives. I do not know that this complaint is produced by hæmorrhoidal affections ; but I am certain, that the uneasiness

and heat of the hæmorrhoids themselves, are capable of being much alleviated by similar injections. Perhaps, in obstinate cases of this kind, the glysters would be more efficacious, if injected quite cold.

Emissions from affections of the bladder, more frequently spring from mere distention than from any thing acrid in the urine. It is necessary, therefore, to avoid much drinking, especially in the evening; and care should be taken to empty the bladder, not only on going to bed, but whenever the patient wakes during the night. Experience has convinced me, that these precautions are not superfluous, as they may appear to the inattentive and ignorant.

Should these measures not be attended with the wished for success, advantage may probably be derived from an injection into the rectum of half a grain or more of Opium, dissolved in two ounces of water or fresh oil, after a water glyster, similar to that above described, shall have been rejected.

It is customary to attribute this evacuation, as well as many others, to laxity of the parts; and of consequence to direct the use of Bark, and other tonic and astringent remedies. But as I am persuaded that this theory is erroneous, so I am also certain that the practice will generally disappoint, and that it will even increase the disorder which it was intended to cure.

Priapism.—Mr. J., aged forty-seven, who has lived for the most part a temperate life, and always a studious and sedentary one, and who has for many years avoided sexual indulgencies, enjoyed good health, ex-

clusively of a disposition to costiveness, till about four years ago, when he began to be affected during the night with frequent priapisms, which were unattended with emissions. They occurred at first during any sleep after having once waked, but of late have waked him during his first sleep, and have been often repeated as the sleep has returned. About a year ago he began to have the addition of sickness of the stomach whenever he woke, and began to look pale, and to become thin, though he did not lose his strength.

The costiveness has continued, and his appetite has been good, the sickness not at all affecting him during the day; but going off soon after he gets up, when it leaves him for a short time in a state of languor.

It having been suspected, that some local irritation about the urinal vessels existed, and was the cause of these priapisms, examination was had recourse to, by eminent surgeons in the Metropolis, who found no calculus in the bladder, no enlargement of the prostate, no stricture, or any other disease in the urethra, rectum, or other adjacent parts.

Having been advised to ride on horseback, Mr. J. was accidentally thrown from his horse under the wheels of a cart, one of which went over his knee, which it greatly bruised, but did not fracture. In consequence of this fall, he was much confined, and a month afterwards had a slight paralytic numbness in the extremities of the bruised side, which, however, was soon relieved.

Let him avoid horse exercise, and walk every day

as far as his strength will permit; abstain from wine and spirits, take no drink after dinner, and every day an hour before going to bed give himself an enema of a pint of luke-warm water.

Strictures of Urethra.—That strictures in the urethra originate in fulness of the vessels, is I think clear, not only from the first cause, but from this circumstance, that they and other parts of the urethra are liable to run into inflammation, a coitu, in which an extraordinary quantity of blood is determined to the whole muscular substance of the penis. On this theory, we can readily explain why affections of the mind will produce temporary strictures, which it is the fashion to call spasmodic.

Spasmodic Stricture, as it is called, often mere fulness.—Authors speak of spasmodic stricture of the urethra. Has the urethra muscular fibres? If not, there can be no spasmodic stricture; but the stricture and recovery are the probable consequences of sudden and alternate fulness and emptiness of the vessels, in the parts surrounding the tubular cavity. It is the same in asthma, there being no muscular fibres in the bronchial vessels; and in nervous deafness.

Evidence that Spasm arises from distended Vessels.—In what is called spasmodic stricture of the urethra, the parts are never so effectually relieved as when made to bleed by the introduction of bougies.

Hydrocele.—Sudden Disappearance of local Dropsy.—July to October 1810. Mr. R., aged sixty, last May twelve-month, began to have some swelling of the left testicle, without pain or soreness,

and which was evidently hydrocele. This increased till July, to the size of a turkey's egg, and continued, in nearly the same state, till the end of April last, when the weather being very hot, he went to Kensington Gardens in a coach, which he there dismissed; intending, after a certain time, to take another coach in order to return to London. After having walked about for two or three hours, finding that no coach was to be had, he was obliged to walk home three or four miles to the very centre of the city. He does not remember having suffered any pain in the affected part during this exertion; but soon after his return home, on going to make water, he found the swelling entirely gone. There was not the smallest discharge from the part, but there was a little darkness of the skin on the outside of the scrotum. He perfectly remembers having perceived the swelling to its utmost extent in the morning.

UTERINE AFFECTIONS.

OTHER AFFIXIONS

MENSTRUATION.

Proof that the State of the Vessels in Menstruation is not confined to those of the Uterus.—In L. S. who had a pretty large cavity on the fore part of the outside of the leg from a slough, the wound continued uniformly to fill up, till the first subsequent period of menstruation. It was customary with her, at these times, to have for two or three preceding days some symptoms of constitutional indisposition, as inappetency, and even sickness, headach, and pains about the back and loins.

When the first period after the accident was about to return, the constitutional affection shewed itself not only by the symptoms above mentioned, but by the state of the wound itself, which, though perfectly healthy before, began now to pour out a bloody ichor, which continued for six or seven days, during the whole time of menstruation ; and in the beginning was followed by an erysipelatous inflammation of the parts adjacent to the wound. Leeches were applied with relief to the erysipelatous part.

At the end of seven or eight days, when the menses had wholly disappeared, the discharge from the wound also ceased, and the wound resumed its healthy state.

Similar symptoms, with the exception of the erysipelas, returned at other subsequent periods of menstruation, till the wound was thoroughly healed.

Swellings in the Abdomen previous to Menstruation.—Miss L., aged forty-four, ten years ago was seized, ten days before the usual period of menstruation, with a difficulty of making urine, the inclination to pass which occurred by fits, and was accompanied with the most violent shooting pain, in which she could not refrain from screaming aloud. This has recurred more or less for one or two days at every period since the commencement of the malady, so as often to require the use of the catheter. In May, 1813, she began to perceive, about these periods, some knotted swelling in the right side, which appeared to subside as the menses flowed. This swelling has gradually increased, but has not been perceived to exist, except at the stated periods, till October last; ever since which, even during the intervals of menstruation, a lump has been easily enough felt over the pubes on the left side, and another on the right, much more deeply seated, and reaching somewhat higher. At these times they are free from pain, even on pressure; but for the three or four last months, for twelve days before the menstrual discharge, these swellings increase and become extremely tender, extending to within a hand's breadth

of the navel, and giving the whole belly the appearance of that of a woman in the sixth or seventh month of pregnancy. The suppression of urine still accompanies the commencements of this increase of swelling, but not to the same extent as since the swellings have increased upwards. The increased swellings generally subside a day or two after the menses begin to appear, and when the discharge is completed, are reduced to their accustomed size. Neither the periods, nor other circumstances, of menstruation are at all unnatural. Immediately after the menstrual discharge, there is, for about five days, fluor albus. During the excess of swelling the pulse is somewhat quicker than natural, and the motions pass with difficulty. On examination per vaginam, the parts about the uterus are evidently enlarged and disorganized.

Menstrual Blood.—The menstrual blood under circumstances of health is certainly not at all similar to arterial. I have seen it just while leaving the vagina of a female in tolerable health, in a grumous state, and of a livid black colour; and in a patient on the fourth or fifth day of most profuse menorrhagia, at that period of life when the menses were about to take their leave, I once saw many ounces of it mixed with about an equal quantity of urine, fallen to the bottom of the pot, of a colour precisely similar to the rich blue purple of a decoction of logwood.

Period of Menstruation.—Mrs. J. began to menstruate at 22, and has continued to do so till now, at 69, without any evidence of uterine disease.

Menstruation often comes on with purging; and the latter is sometimes substituted for it.

Fluor Albus from the Uterine Vessels.—Anne C., a girl of seventeen years of age, for a considerable time affected with violent and constant palpitation of the heart, which made lying down extremely uneasy, without cough or difficulty of breathing, with no appearance of chlorosis, of a healthy florid complexion, with an obstruction of menses for five months, was, at the exact times of the two last menstrual periods, instead of sanguineous discharge, affected with fluor albus, accompanied with the pain about the loins, and other feelings common to the menstrual evacuation.

Flooding. Bad Effect of a Full Meal after violent Inanition.—Mrs. B., aged between forty and fifty, had been for ten days affected with a violent flooding, from which she recovered so far as to be able to walk out; but after three days suffered a relapse, in which for twenty-four hours she passed very large clots of blood. This discharge did not prevent some comfortable rest; and produced no considerable debility. When, however, the following morning, by the advice of her friends, who were anxious to support her strength, she eat somewhat more than her usual quantity of her accustomed breakfast, she was, at the expiration of half an hour, seized with a vehement palpitation of the heart, followed by cold sweats, and such a disposition to syncope, that all her attendants expected her immediate dissolution. In this state I visited her; and having given her repeated small doses of Opium, had the satisfaction of seeing the

symptoms gradually subside, so that in somewhat more than twenty-four hours she recovered, without any return of the hæmorrhage.

Sickness coming on, on the going off of Menses; nervous and dyspeptic.—Mrs. C., a young lady, within a very short period mother of eight children, and who did not nurse the three last, ever since her last delivery, two years ago, has been affected almost every month immediately after the cessation of the menses, with nausea and loss of appetite, so that she cannot bear the sight of meat. After two days the complaint increases to actual sickness, accompanied with vomiting, which is generally of mucus, but sometimes of bile, green or yellow, bitter, and often sour. With this sickness she has frequent attacks of great coldness and shivering, which last for ten minutes at a time, and are not succeeded by fever; but are attended with throbbing in her head, and coldness of her feet. Sometimes previously to the attacks, she has a sensation in her stomach like the pricking of pins; and during them she has great flatulency. They generally continue for a week, and then going off, leave her weak for three or four days, and afterwards in tolerably good health, till the close of the next menstrual period. She often wakes under the sickness at three or four o'clock in the morning; eats at all times what her appetite will admit, and does not find that the species of food makes any difference as to the degree or duration of the vomiting, all being alike rejected. During the fit, her bowels are confined, and occasionally so at other times. She

has never headach or giddiness ; but is subject to palpitation of the heart, and mental depression without any assignable cause. She is also sometimes slightly hysterical, and has occasional oppression of the chest, and difficulty of breathing. Attacks of sickness, similar to those which I have described, have sometimes also been brought on by agitation of mind, and night watching. After the attacks have ceased, her stomach is sore, as if scraped with a knife. Her urine, during the fits, is high coloured ; at other periods, often very pale. Her menses are regular as to period, and all other circumstances. Her bowels, though often costive, are very easily moved. Pastry does not agree well with her stomach, occasionally producing heartburn ; and tea turns acid on her stomach. When tolerably well, she feels comfortable after dinner and wine. Pulse now, a fit being nearly over, 72, and rather hard ; and that of the carotid natural.

She has employed a great variety of remedies without benefit, as Bath Waters, and various cordials, stimulants, and tonics ; blisters to the stomach, and sinapisms to the feet. Purging during the attacks has never relieved her.

Conceiving this complaint not to be true dyspepsia, but to be a spasmodic affection partaking of the general constitutional disposition, I ventured to promise that it might be eventually cured, and that not by tonic or cordial remedies, but by those which are usually called sedative and refrigerant, aided by a suitable regimen and a due administration of aperients.

With this view I advised Mrs. C. to abstain from much butter and sugar, from pastry, and rich confectionary, new bread, and toast or muffins buttered while hot ; from salads, vinegar, pickles, and raw winter fruits ; from rich puddings, salmon, pork, fat and fried meats, meats much hardened with salt ; tea, coffee, chocolate, acescent wines, malt liquor, cider, and perry ; and that her food should be at all times eaten in less quantity than the most moderate appetite would at once require ; the frequency of meals making amends for their smallness. The same rule was to be observed with regard to liquids, which were never to be drunk hot. She was allowed one or two glasses of wine daily ; and a pint of Soda or Seltzer Water was recommended to be drunk every day. This regulation of diet was applied both to the periods of the attacks, and their intervals.

Mrs. C. was requested to take uniform exercise in fine weather, both on foot and on horseback. When the weather was unfavourable, the exercise of the chamber-horse, and of swinging light weights within doors, was to be substituted for the former. Her feet and legs were to be clothed warmly ; but hot rooms, as well as late hours, were interdicted. It was directed that the stomach and bowels should be rubbed, night and morning, for at least half an hour, with a warm hand.

With regard to medicines, I recommended that the following pills and mixture should be taken for at least six weeks, the Aloës being regulated, so as to keep the bowels gently open every day.

℞ Aloës Socotorinæ gr. ij. vel q. satis sit.
 Oxydi albi Bismuthi gr. xii. ad gr. xv.
 Confectionis Cynosbati q. s. sit. Ft. Pilulæ vi.
 æquales. Sumat duas quotidie meridie, horâ
 7mâ p. m. et horâ somni; Misturæ sequentis
 cochlearia duo ampla superbibens.

℞ Potassæ Carbonatis ʒij. solve in
 Aquæ distillatæ ʒvj.
 Spiritûs Myristicæ Nucis ʒij. M.

Immediately after the cessation of the menstrual discharge, and if possible, previously to the usual attack of vomiting, three grains of Calomel were to be given, followed by a draught of Manna, Sulphate of Magnesia, and Tincture of Senna mixed with Infusion of Roses, the next morning. On the noon of that day, the use of the other remedies was to be recommenced, and continued as before, till the cessation of the next menstrual period.

Of these measures, which were directed in writing in October 29, 1809, I requested to hear the result, at the end of the period specified.

It was not, however, till the first week in the January following, that I received a letter from the husband of Mrs. C., of which the following is an extract :

“ I should have done myself the pleasure to write
 “ to you before, only I waited to observe what effect
 “ would be produced on Mrs. C.’s ceasing to take the
 “ medicine you were so good as to prescribe for her
 “ at Bath. She persevered most scrupulously in
 “ taking it for six weeks, with the happiest effect.
 “ At the end of that period she left off, and has not

“experienced the smallest return of her dreadful
“sickness, with which she was before afflicted ; and
“I flatter myself, as her appetite is now very good, and
“all the animal functions regular, that the complaint
“is entirely removed. It may be necessary to observe,
“that the only instance in which she deviated from
“your directions, was, instead of Soda Water,
“which she found too cold for her stomach, that she
“took about a wine glass and a half of Madeira or
“Sherry in water, at dinner, and one glass of the
“same after dinner, and which she still continues,
“abstaining from malt liquor.”

Digitalis in Menorrhagia.—May 26, 1799. Miss M. K., aged twenty-four or twenty-five, has had menorrhagia for six months ; complains always of coldness, especially of the feet. Is pale and cold to the touch. Tongue natural. Pulse moderate.

Digitalis made the pulse irregular, and about 52 in a minute ; and for three days the flow, which was before dark red, has been growing pale, and now not one-fourth in quantity, and white. Sense of faintness, and weakness of the stomach, with occasional sickness during that period. Great disposition, during this action of the digitalis, to sighing, which deep inspiration always immediately makes the pulse beat regularly four strokes in succession, and quicker, while at other times it is not so more than from one to two.

Ascites after suppressed Uterine Discharge.—As soon as Mrs. L. ceased to have a frequent uterine

discharge, ascites, which before existed, immediately increased. [1815.]

In Mrs. S., a uterine discharge of whitish matter, coming on by fits, is usually attended with cramp in the legs.

STATE OF PREGNANCY.

State of indirect Debility existing in parturient Women.—On a former occasion, I have adverted to the febrile state to which pregnant women are subject, and the pains taken by nature in different ways to throw off fulness, together with the contradictory processes produced by appetite or fashion, in patients and their friends, by high living, indolence, and want of evacuation to counteract these obvious designs of nature. These practices place pregnant women in a state apt for the production of subsequent disease.

The process of parturition, which succeeds, is always a painful and often a very laborious operation ; the very expectation of which, in ill educated females, and especially those predisposed by indolence and luxury, produces long inordinate action in the sanguiferous system.

To this state necessarily follows another most important process. The uterus, increased by gestation to a bulk, comparatively enormous, is now, by the absorption of nearly the whole of its substance, to be

reduced within its pristine dimensions. For this purpose much new matter must be taken into the blood-vessels, and great changes must be produced on the course of the circulating fluids. These states may in some degree, and usually effectually, be assisted by the lochial discharge, and by the formation and evacuation of milk; whence, both in theory and fact, it would follow, that women who give suck are less liable to violent constitutional derangements.

On the Disorders which occur during Pregnancy.—They are, first, vomitings, and headachs, with costiveness; afterwards inflammatory pains of the face and teeth, feverishness, high coloured urine, hot and restless nights.

These are all marks of a change of circulation and fulness, arising from want of menstruation.

During the state preceding and accompanying pregnancy, especially young and early married women, usually lead a more indolent, and otherwise luxurious life, than that to which they were accustomed. Hence increased irritability and plethora.

Determination to Head in Pregnancy.—Mrs. W., leading a very sedentary life, and having been ten times pregnant, in every pregnancy but the first, from the second month, during the whole time, had the most vehement headachs with giddiness, and a violent sense of bursting, at the usual periods of menstruation, which during many days no remedy whatever would relieve, till she was blooded. Twice in the second month, she was advised not to submit to that operation, and both times immediately miscarried.

In *pregnant females*, especially on any exertion, there is great quickness of respiration.

Phlegmasia Dolens.—One of the instances of irregular determination of blood, is the *phlegmasia dolens* of parturient or pregnant women; in whom inflammatory affections are very rife, and who are particularly subject to them after delivery, probably from the changes of circulation which at that time occur.

The case of swelled lower extremity occurring to lying-in women, and others, and accompanied with knotty swellings of glands in the groin, &c., I have long considered as an inflammation of the lymphatics; and got great credit by curing by refrigerants, as saline medicines with Squills, Calomel, purgatives, and cold applications, after fomentations, &c., had failed. So in the case of Mrs. W., near Marlborough, about 1797, twelve or fourteen years ago. [1811.]

Prevention of Miscarriage.—The means of prevention are precisely those which counteract the hæmorrhagic diathesis: such are, a sparing diet, chiefly of a vegetable kind, abstinence from alcohol and hot liquors, early hours, cool rooms, bodily exercise carried as far as the strength will permit, and a strict attention to the state of the bowels. These measures, habitual during the intervals of pregnancy, should be continued during that state; with this difference, that the temperance should, if possible, be then stricter than before, and the bowels more frequently opened. To this may be added occasional small bleedings, especially just before those periods, which would, under other circumstances, be those of menstruation. Till

the disposition has been in a considerable degree overcome by a perseverance in these means, the longer the intervals between pregnancy, the better.

With regard to *cool-bathing*, I am inclined to consider it as a palliative, and not a radical remedy. In this respect it resembles Eau Medicinale, and many means, which only for a time repress action, without removing that which excites it, and perhaps even makes it salutary. It is at least probable, that the measures which I propose, continued for a considerable length of time, will make cool bathing unnecessary.

This is the general plan which I have been accustomed to recommend in such cases, and which I have usually found successful. The more temperately and hardily females live, the less are they liable to these accidents, which rarely befall the poor. The particular modifications of the plan must, of course, be adapted to the circumstances of the individual case.

[Sept. 20, 1813.]

This advice and plan were eminently successful in the particular instance in which they were recommended.—ED.

CONSEQUENCES OF PARTURITION.

Affections which I have witnessed after Lying-In, exclusively of Hæmorrhage, Convulsions, and swelled Thigh and Leg.—Increased action of the heart shewing itself,—1st, in palpitation and fatal syncope, after one or several days: Mrs. ***.—2dly, in difficult or short respiration, and, after some days, proving fatal: Mrs. R.—3dly, in common peritonæal inflammation.—4thly, in fatal pleurisy, and probably inflammation of the heart itself: Mrs. K.—5thly, in spasmodic pains of the limbs, groins, thighs, and legs, many days together, every fit of fever giving the pains, and then diminishing by sweat, and the pains abating: Mrs. H.—6thly, in acute articular inflammation of the elbow, or perhaps knee, with great fever, or gout. Mrs. P. O., Mrs. A.; the latter suddenly died.

Separation of the Symphysis of the Pubes from a hard Labour, and consequent Death.—Mrs. H., aged thirty-one, well formed and moderately fat, and for the first time pregnant, was, after a very painful

labour of fifty-eight hours, during which she had no sleep, delivered, about nine o'clock in the evening of the 30th of April, 1813, of a dead child. The placenta adhered, and required for its removal the introduction of the hand into the uterus. No more than the usual hæmorrhage followed. The bowels had been freely opened by glysters during the labour, for several hours previously to the termination of which, she passed her stools in bed under her. Soon after the delivery of the placenta, she was seized with a violent rigor, which continued for fifteen or twenty minutes. I saw her about eleven o'clock at night. There was no preternatural heat of the skin; but her pulse was 150 in a minute; her respiration was greatly hurried; and she complained of a violent throbbing in her head, unaccompanied with pain or delirium. Thirty drops of Tincture of Opium were immediately given; and she was directed to take every four hours three grains of Extract of Hyoscyamus, with one of James's Powder, followed by an effervescing draught of Carbonate of Potash. She slept quietly the greatest part of the night; and at nine o'clock the next morning her pulse and respiration were nearly in a natural state, and she was otherwise so well, that my further attendance was considered unnecessary. Accordingly I visited her no more till the evening of the 10th of May, when I found from Mr. Cam, that, from the time of my last visit, she had laboured more or less under a quick pulse and other symptoms of fever; that she had never got up, and had continued uniformly to pass her motions

under her, notwithstanding there was neither delirium nor any remarkable prostration of strength. I found her under great agitation of spirits, with a strong pulse of 120 in a minute, and a very furred and dry tongue. She had that morning begun to complain of pain about the groin and the union of the thighs to the pelvis, especially on the right side, which was very much aggravated on moving her limbs. The account which she gave was extremely indistinct; and she expressed a sense of pain on pressure about the groin and down the right thigh, in neither of which there was any swelling or redness. Her urine was small in quantity, high coloured, and turbid on standing. Infusion of Senna was given so as to produce free purging, with effervescing Citrate of Potash, and Opiates.

On the morning of the 11th, all circumstances were as before, except that a considerable degree of yellowness was observable on the whole skin, and on the tunica albuginea of the eyes. There was no pain or fulness about the liver; and she could take a deep breath without inconvenience. The stools were of a natural yellowish brown colour; and the urine was much as before, with a yellow hue at the edges. At half past nine in the evening, just after having been moved for the purpose of being cleaned, which brought on a great increase of pain, she was seized with a violent rigor or tremor, unaccompanied with any particular coldness, in which her jaws and other parts were affected with shaking. No preternatural heat followed these symptoms, which continued for a

quarter of an hour. Forty drops of T. of Opium were given, and shortly afterwards the pain ceased, and she was able gently to move, without any expression of inconvenience. The medicines were continued.

The next morning, the 12th, free evacuations were procured by the Senna. No change of circumstances occurred.

On the 13th, the pain, quickness of pulse, and other symptoms continuing, with an extremely dry tongue, the remedies were repeated, and Opiates with Digitalis were administered in small doses through the day, and the former in larger doses at night.

On the 14th, leeches were applied to the pubes, and drew well, but afforded no relief. There had been no delirium, but a feeling of wildness in her head. The pulse was never under 120 in a minute; and the pain, incapacity of moving, heat and colour of skin, and evacuation of her stools under her, still continued; though her tongue was become clean and moist. It being judged probable that the symptoms arose from a division of the symphysis of the ossa pubis, an examination was made with that view by Mr. Cam, who, however, was not able to ascertain the point. On being, however, closely questioned, the patient said, that when she attempted to move, she felt the bones grate against each other.

From this time to the 16th, the pain was intolerable; so that Mrs. H. screamed violently on the least touch, or attempt to move her lower extremities. Her sleep was very irregular. Occasional shiverings occurred; and the pulse sometimes rose to nearly 150 in a

minute. The tongue, however, still continued clean and moist. There was no diminution of the yellowness of the skin; but she was free from pain of the hypochondria; and the motions, which were abundantly procured, were always sufficiently tinged with bile.

On the 17th, Mrs. H. began to have a kind of maniacal delirium, in which she answered questions readily, and with a tone of vehement decision; but wandered with equal vehemence, when not spoken to. The tongue became again dry; and the pulse was 130, strong, and full. Blood taken from the arm exhibited a thick, firm, concave crust of coagulated lymph, with fimbriated edges. Other remedies as before, with tepid fomentations. Some slight relief seemed to have been derived from the blood-letting, and the night was rather more tranquil. In the morning of the 18th, the pulse was 120, and hard. There were, however, no other symptoms of amendment.—About three o'clock in the afternoon, soon after having been taken out of bed and laid on a sofa, she very suddenly expired.

She was opened the next day, at six in the morning, in my presence, by Messrs. Cam and Norman, junior.

The body was fat, and extremely well formed.

The symphysis of the ossa pubis was entirely divided through its whole extent, so that the bones gaped nearly three quarters of an inch asunder. The ligamentous union was gone; the front of the os pubis on the right side was carious; and an abscess, full of matter, extended within the right labium, on

the outside of the bone, down under the fascia of the thigh to the great vessels.

The uterus was full three inches and a half in transverse diameter near its fundus. It was thick, and had within, near the fundus, the brownish-red, irregular prominence, marking the place of attachment of the placenta. There was no appearance of inflammation about the uterus, ovaria, or fallopian tubes. The spermatic vein on the right side, through its whole extent into the cava, contained not a drop of blood, but was full of purulent matter. The internal coat was of a livid colour, and lined with a crust of coagulated lymph.

The gall bladder contained a moderate quantity of healthy bile; and there was no concretion either in it or either of the ducts, which, with the duodenum, were in a perfectly natural condition. The liver and its coverings were free from inflammation, and all other perceptible disease; except that, when cut, the surfaces were slightly tinged with yellow.

No deviation from the usual state could be found in any other of the viscera, whether of the thorax or abdomen.

Death after Pregnancy, and Dissection.—1788. Mrs. P., aged forty, of a full habit, liable to nervous complaints, and to rheumatic pains of the face and head, had been once before pregnant, and safely delivered of a child which is alive. About the middle of November, she was affected with violent pain of her face and side of the head, accompanied with considerable fever. The pain attacked her very regularly

about ten in the morning, and almost entirely left her at night, so as not much to interfere with her rest. Blood taken from the arm was covered with a thick inflammatory crust. The complaint yielded to this remedy, and the use of a blister, applied near the affected part. For more than two years before the present illness, she had been frequently much agitated by the ill health of her husband, who, during that whole period had from two to nine or ten epileptic fits in a day; and who had two unusually bad ones the day after her recent delivery, which happened on Saturday, Dec. 13, 1788, about noon, after a short, natural, and unassisted labour. No hæmorrhage occurred till the separation of the placenta, which came away in a few minutes after the birth of the child; and the hæmorrhage succeeding that separation was unusually small, and the after pains inconsiderable. She passed a good night.

Dec. 14. She was somewhat restless, and had no motion. Her pulse was full, rather quick, and intermitted every sixth or seventh stroke. Fifteen drops of Laudanum were given at night.

Dec. 15. She passed a rather restless night. Pulse somewhat fuller, but still intermittent. Complained of some pain in the head, and a sensation threatening delirium. The lochia flowed regularly; she had no pain, soreness, or tension of the abdomen; passed her urine freely; and was that evening able to suckle her child. Having had no stool, a dose of Castor Oil was given her, which operated thrice. An opiate was ordered conditionally, which she took.

Dec. 16. On the preceding night had rigors, followed by feverish heat and sweating, notwithstanding which she passed a good night after the opiate. Rigor again occurred this morning. Pulse perfectly regular. Skin gently moist. Complained of pains about the hips, shoulders, and elbows. Head better. Lochia, milk, &c. regular. No stool.

Dec. 17. Had a rigor the preceding evening, succeeded by heat and a considerable perspiration. Night restless, with tendency to delirium. This morning another rigor, also succeeded by feverish heat, but both less considerable than last night. Pulse more quick, full, and intermitting every fourth stroke. No stool. Pain about the thorax, shoulders, and neck, which were sore to the touch, and rendered motion uneasy. Lochia and milk regular. No tension of the abdomen. Breath quick and laborious.

R̄ Man. ʒiij. Solve in

Inf. Sen. com. ʒiss, et adde

Tinct. Sen. ʒij. Sum' statim.

Seven P. M. Has had three purging stools from the draught. Pain as before. Breath very short and quick, so that the lungs appear very little dilated, and each inspiration is, as it were, convulsive. Some cough, which, however, was not frequent, and is impeded, as she says, by her being unable to cough out. No pain in the head. Skin hot, but moist. Feet warm. Tongue white, but moist. Pulse at least 120, unequal as to strength, and intermitting every seventh or eighth stroke. No pain or tension of the abdomen; and lochia and milk natural.

Eight ounces of blood were ordered to be taken from the arm, a mixture of Ammonia and Lemon juice to be frequently given, and twenty drops of Tinctura Opii at bedtime.

Dec. 18, half past ten A. M. Had another stool in the evening. Blood covered with a very thick buff coat. Passed a sleepless night, with constant talking; but no complaint of pain in the head. In this restless state, about seven in the morning, the opiate was repeated. Immediately after the bleeding, the pulse became more equal, and intermitted only every twenty-fourth or twenty-fifth stroke. Pulse now quicker and weaker, but perfectly regular. Skin not hot. Respiration still quicker, and more laborious. No pain in the head. Cough more frequent; something apparently rising into the throat, without her being able to expectorate it. Pains more violent about the sides and left shoulder. Breath easiest in the erect posture. Urine turbid on standing, and of a yellowish tinge. Complains of a great deal of flatulency.—Mitt^r Sang. iterum ad ℥viij. Applic^r Empl. Vesicat. lateri præcipue dolenti. Let her take a little warm peppermint water.

Six P. M. Blood again covered with a thick buff coat. Pulse regular, but weaker and quicker than before. Breathing also more laborious. She says she is free from pain, but extremely sore all over; and complains that the peppermint water affected her head. Lochia and milk in a proper state; and she has no pain about the pubes. Has been up, and had her bed made.

Dec. 19, quarter past ten A. M. Passed a very restless delirious night, but now answers calmly. Is free from pain every where, but is all over sore. Pulse and breathing much as before. No stool. No expectoration. Cough rather increased. Tongue moist, but of a purplish red colour. Lochia continue, but the milk is almost gone. Flatulency continues. Skin all over moderately warm.—*Applic^r statim hirud. viii nuchæ, et postquam cutem miserint, admoveantur orificiis cucurbitulæ, ut detrahantur Sanguinis ℥iv.*

Five P. M. Leeches and cupping glasses were applied, and the operation finished about three o'clock; after which the pulse became, according to the report of Mr. Norman, fuller and stronger. The pulse is now, however, quick, weak, and extremely intermittent. She is altogether incoherent; and there is every appearance of her not surviving many hours. She died in the night.

The various remedies employed are not specifically entered in my notes; but they were of the saline, diaphoretic, and aperient kind.

She was opened by Mr. Norman, in my presence, at a quarter before ten in the morning of the 21st.

The abdomen appeared externally very tumid, but was free from fluctuation. In its cavity were about a pint and a half of a turbid, reddish brown fluid.

The stomach and intestines were prodigiously distended with wind; and in the cavity of the former there was about a pint of a fluid similar to that before described as in the abdomen, only somewhat more red.

In the pelvis there were about four ounces of fluid of a yellowish white colour, resembling pus. Both fallopian tubes were, on their surface, of a dark red colour; and a copious extravasation of dark fluid blood was found in the cellular membrane, to a considerable extent round the right tube, extending upwards towards the kidney, but not downwards into the pelvis. The mesenteric veins in the neighbourhood were very turgid with blood, and the extravasation was apparently from them. The left ovarium was converted into a reddish substance, which dissolved under the touch; and on it there was an hydatid as large as a nutmeg, containing a gelatinous semi-transparent fluid. The right ovarium was not diseased. There was not the smallest appearance of disease in the peritonæal covering of the uterus, in its substance, or its internal surface. In point of contraction, its longest diameter externally was seven inches, its transverse diameter externally five inches. The thickness of its substance about the middle of its length was an inch, and it was pale and firm. At the fundus and mouth, it was about half an inch. The os uteri was of a dark purple colour, readily admitting two fingers. Where the placenta had adhered, there was a roughness of a dark purple colour, containing orifices of vessels capable of being traced with a probe into the substance of the uterus, at a very acute angle with the internal surface. In the cavity there was a small quantity of a dark coloured fluid, exactly similar in colour and smell to the lochial discharge.

There was no where any appearance of coagulable

lymph either attached to the peritonæum, or floating in the abdomen.

The peritonæal surface of the lower part of the right lobe of the liver was much inflamed; and on account of a similar state on the upper and posterior part, the liver there strongly adhered to the lower surface of the diaphragm, so as to be incapable of separation without rupturing the diaphragm. The substance of the liver, near this adhesion, was of a remarkably loose texture.

The spleen was in an unusually flaccid state.

The mesentery, in general, was of a dark red colour, with its veins, as I have before observed, much distended with blood, and various extravasations of fluid blood into the cellular membrane in its vicinity. It adhered to the right kidney, the peritonæal coat of which was red as if injected, with many spots in it of a darker colour. The kidney itself appeared preternaturally enlarged. The left kidney adhered in the same way, and its peritonæal coat was similarly affected. Both, when cut into, were of a deep purple colour. There was nothing preternatural in the pelvis of either; and the ureter, on each side, was perfectly pervious throughout its whole length.

The bladder itself was not diseased.

In the thorax, the left cavity contained at least four ounces of bloody serum; and the right, probably, an equal quantity. This, however, could not be exactly ascertained, from the rupture of the diaphragm before mentioned. There was no where any adhesion, but a slight one between the anterior part of the peri-

cardium and the pleura. The lungs were of a darker colour than natural.

In the pericardium, there was no more than the usual quantity of fluid.

All the cavities of the heart were full of polypi; those in the right and left ventricles consisting almost entirely of coagulated lymph, in a very firm state, with a very slight and almost imperceptible accretion of red on the lower side. That in the right ventricle extended into the pulmonary artery three inches beyond its bifurcation. That in the left penetrated at least eight inches into the aorta, and followed the course of the subclavian and carotid arteries to the distance of five inches or more from their rise out of the arch of the aorta.

Death from Uterine Hæmorrhage.—July 24, 1811. Mrs. F., aged about thirty, was delivered on the 22d, after a very hard and long labour, of her —— child. A violent hæmorrhage immediately took place, so that it became necessary to remove the placenta by introducing the hand into the uterus; which was done within a quarter of an hour; though a small portion did not come away till the next day. In this state she became suddenly faint, and the pulse was scarcely to be felt. These circumstances continued till the following day, when the pulse became somewhat stronger. The whole body and extremities were, however, still cold, and for the most part bathed in a clammy sweat. About six in the evening, a shivering took place, and was soon followed by increased quickness and strength of pulse, and preternatural heat over her whole body.

When I saw her two hours afterwards, her pulse was 144 in a minute, and extremely full and bounding; the respiration laborious and 42 in a minute; and though the skin of her face and hands was almost bloodless, being of a sort of transparent sallowness, the heat was every where greater than natural.

In this case two points are worthy of attention :

1st. That shivering seemed to have taken place, in order to stimulate the heart to increased action.

2dly. That preternatural heat may occur with deficiency of blood in the extreme vessels. There was, however, greatly increased velocity.

On the 25th, the pulse was 140, and weaker ; the respiration 44, and more laborious, and several slight convulsive attacks had occurred during the night. The countenance was bloated, and apparently bloodless ; and the heat of the face and hands below the due degree. In the course of that day she died.

Cause of Puerperal Fever.—This fever is found to consist of inflammation, that is to say, a great and preternatural distention of the vessels of the peritonæum, accompanied with a great degree of fever. It is in this case difficult to decide whether the fever is the cause or the effect of the local disease. When, however, we consider the state of the uterus during pregnancy, the immense size to which it reaches in the last month, and the great quantity of blood which circulates through it in order to supply the placenta, and from thence the foetus, we can readily conceive a very sufficient fountain of increased and irregular determination, if through various accidents, as the want

of proper hæmorrhage and subsequent lochia, the want of giving suck, exposure to great heat, the use of ardent spirits, costiveness, premature exertion or sitting up, high irritation of the nerves, too great an impulse should be occasioned in the neighbouring vessels, while the great process of absorption and new circulation is performing.

Salutary circumstances following Pregnancy.—During that state, females are subject to fever, heat, restlessness, thirst, tooth-achs, rheumatism, spittings of blood, and other inflammatory affections. These symptoms are relieved first by the natural discharges, and cured by giving suck, under which they gradually subside. If females do not give suck, milk abscesses, as they are called, in the breast or other parts occur, and relieve the constitution. These symptoms, usually adduced as reasons against nursing, are the best reason for it.

Enlarged Uterus, &c.—Mrs. C., aged about sixty, has been for many months past troubled with weight and distention of the abdomen, in which a hard substance has been at various times perceived by her, and has appeared not always to occupy precisely the same spot. From this malady she has not felt any very great inconvenience till within these few weeks, that her flesh has declined, and there has been a considerable increase of the following symptoms: she always finds a difficulty in passing her urine, though she is capable of always retaining the usual quantity, sometimes almost to the amount of a pint; and neither the evacuation nor a moderate retention of it

gives her any pain. Her urine is also of a natural colour, and free from any adventitious admixture or sediment. She has a similar difficulty in passing her stools; and of late she has been obliged to take to the extent of six or seven table spoonfuls of Castor Oil, followed by one or two glysters, before she has procured stools. The stools of yesterday are loose, and of a dark colour. Her appetite is extremely bad. Her pulse somewhat quicker than natural. Skin moderately cool. She has not menstruated for many years, and has not since been affected with any uterine discharge.

On examination I discover a tumor within the abdomen, apparently rising by a small neck from the middle of the pubes, and extending in a pyriform shape as high as the navel; being towards its fundus nearly as large as my hand can grasp. It does not appear to go on either side to the region of the ovaria, neither does it reach the epigastrium. It is rather hard, not fluctuating or painful on moderate pressure. In the left hypochondrium there is another hard swelling, unconnected with the former, and which, from its hard convex edge, its continuing up under the ribs, and its moving downwards when the patient makes a deep inspiration, I judge to be the small lobe of the liver.

I believe the former swelling, all circumstances taken together, to be an enlarged uterus; but no examination, per vaginam, has hitherto been made, and Mrs. C. is not able to recollect in what precise part she first observed a tumor.

Let her take Aloës three or four times a day, so as to keep her bowels uniformly open.

The event of this case, which I never again saw, was, that Mrs. C. would take no medicines after the day succeeding my visit. On that day she had a stool, but none afterwards till her death, which happened twenty-eight or thirty days after.

A dissection was refused.

Difficulty of distinguishing between Calculus in Kidney or Ureter, and Uterine Affection.—Mrs. K., after a miscarriage, has been ever since liable to violent fits of pain about the groin, shooting downwards from the loins, especially on the right side, and coming on by fits, with long intervals. These fits, when bad, are always accompanied by some preternatural state of the urine; as turbidness on standing, with a reddish mucous sediment, and occasionally blood. At other times there is a frequent call to make water, and then the urine is pale. When the fits are bad, they are accompanied by nausea and vomiting, and usually with fever. At the same time there is commonly, but not always, a following of vaginal discharge, sometimes tinged with blood. Menses regular. The fit goes off without any passing of gravel, is aggravated by costiveness, and relieved by purging. The groin and belly are sore on pressure, and the pain is very much aggravated by walking, and more especially exercise in a carriage. Quere, What is this complaint? In the intervals she appears quite well, except after violent exercise, which brings on attacks in a greater or less degree.

Ovarial Diseases, incysted Dropsies.—These usually happen to women at an advanced period of life; but sometimes, as in Miss N. and Lady D. H., at a much more early period. The former was about twenty-two; and the ovarium occupied the whole right of the abdomen, and two inches to the left of the umbilicus. Little pain on pressure; and from a certain degrees of fatness, no fluctuation perceptible. Her menses were regular as to period, quantity, and colour; she had no preternatural discharges; and in her face no appearance of disease. In Lady H. who had had one child, a constant uneasiness in one side, but as is usual in such cases, greatly aggravated by fits, and then accompanied with slight discharge of films of coagulable lymph.

It is easy to conceive how irritation of the ovarium, arising from congestion and occasional inflammation, may be communicated to the uterus itself, so as to produce discharges, without continuity of cavity, so as, by the neighbourhood, to relieve the ovarium itself. These discharges, indeed, amounting to a great deal of serum, and sometimes lymph or blood, will often accompany the fit of aggravation (which, in Mrs. S. and most others, is usually the course); and, after a continuance of several days or weeks, will relieve the local state, and also the fever which very often attends the fit.

CHLOROSIS.

Amenorrhœa without Chlorosis.—Females who have been a long while without menstruation, and who have no apparent visceral disease, are not always chlorotic.

Anne G., aged twenty-one, unmarried, in a decent situation in life, of middle size, plump, and of florid complexion, in the midst of good health, but leading a very sedentary life as an apprentice to a mantua-maker, all at once ceased to menstruate a year and a half ago, after a menstruation more than usually copious. About a year ago there was a slight return, of a proper colour, for a day only; but since that time there has been neither any appearance of menses, nor any discharge of any kind whatever. No feelings at particular periods, indicating a menstrual effort, have ever since occurred. She has had no complaint except a sense of weight on the top of the head; excessive sensibility and costiveness; and can take exercise of a moderate kind without breathlessness or unusual fatigue, both of which, however, she in a

slight degree experiences on walking up hill, or up stairs. Pulse 80, and soft, (at my house.) By my order she was blooded about a week ago, and has taken aperients ; in consequence of which her head is better.—*Pergat in usu Pilularum è Colocynthide.*

℞ Syrupi Scillæ ʒij. Sumat ʒj ter die cum Aquæ coch. duobus amplis.

April 14. Bowels slightly open once a day, and no sickness. Head at times very painful. She has taken no pills.

℞ Extracti Colocynthid. ē. ʒj. Ft. Pilulæ xvi æquales. Sum^t j singulis noctibus horâ somni.

—Sumat Syrupi Scillæ ʒj ter die ut antea.

April 21. She has had three motions daily from the habitual use of the pills, is free from sickness, and is much better with regard to her head. Menses appeared on the 16th, in a proper manner, and still continue. Pulse about 72, soft, and somewhat irregular.—*Pergat in usu medicaminum.*

April 28. The menses ceased on the 23d. Her bowels have been regularly open, and she is now free from complaint.

Total Defect of Menses without Chlorosis.—Nov. 5, 1802. Mrs. W., aged twenty-two, of a tall and fine person, fair and florid, with light hair rather inclining to redness, plump, and abundantly possessing all the external marks of sexual distinction, for four years married to a young and vigorous man, had always enjoyed good health, except that she was occasionally costive, and had sometimes coldness of her feet even during summer, accompanied with some feeling of sickness

in her stomach, and with a sense of lightness in her head, which was always increased by wine. She was strong, capable of the most active exertions in walking or dancing, and could ride on horseback twenty miles, without shortness of breathing or fatigue. Her appetite, digestion, and spirits were good. Under all these circumstances she had never in her life menstruated, or had any uterine discharge whatever. At certain periods, indeed, she had pain, soreness, and increase of tumefaction in the mammæ, but never any pains about the abdomen, back, or loins ; pulse 60, and rather weak. She had employed various remedies, as Calomel, electricity, tepid bathing, &c.

Two of her elder sisters were married, and had children every year. It is hardly necessary to add, that she was herself never pregnant.

She was directed to wear worsted stockings under the silk, to use for a quarter of an hour, on the following evening, a semicupium of 94 degrees, and to take thrice a day of James's Powder, dried Squill, and Aloës, each half a grain.

On the 10th of November, I found that she had for eight or nine months had a little expectoration every morning of mucus slightly tinged with blood, but that she had no cough the rest of the day, or any fever, or indication of pulmonary affection. The semicupium had been employed twice, and agreed well, and her bowels had been regularly open. She employed the bath and pump in various ways, for some weeks, with remedies to guard against costiveness. Her pulse varied from 60 to 72, and she

seemed in other respects to enjoy good health, except that her menses still did not appear previously to her return to Ireland, of which she was a native.

I had no method of knowing whether there was any malconformatibn of the uterine system in this Lady ; but from the appearance of her mammæ, which were more than usually tumid, and other circumstances of form, I should presume there was no such malady. This case, therefore, proves that chlorosis is not the necessary consequence of amenorrhæa.

Chlorosis without Amenorrhæa.—May 9, 1812. Anne L., aged twenty-two, whom I attended about five months ago with a cough, pain in the side, and œdema of the legs, all of which were cured, and who has now a pallid chlorotic countenance, has been subject for a twelvemonth to a cough, accompanied with dyspnœa and some expectoration, never tinged with blood. The cough is now very slight, but her breath is so bad on exercise, that she is scarcely able to walk up hill or up stairs. This state is always accompanied by a violent palpitation of the heart, which never occurs but from muscular exertion. She has no difficulty or shortness of breathing when recumbent, and can lie equally well on both sides. She sleeps well ; and is always weak, languid, and drowsy. Her menses are proper as to period, quantity, and colour ; but each return is accompanied, during the first day, with considerable pain across the lower belly and back. No fluor albus. She has seldom a motion oftener than once in two days, and that very

costive. Appetite bad. She is flatulent, and often sick after eating. Skin cool. Tongue tolerably clean. Pulse 92, and soft. She has often great pain and weight over her eyes.

℞ Hydrargyri submuriatis gr. iij.

Confect. q. s. sit Ft. Pilula horâ somni sumenda.

℞ Infusi Sennæ ℥vss.

Tincturæ Sennæ.

Magnesiae Sulphatis āā ℥ss. M Sumat cochlearia duo ampla cras primo mane.

℞ Pilularum Cambogiæ compositarum ℥ss. Ft.

Pilulæ x æquales. Sumat unam singulis noctibus horâ somni.

May 15. The medicine operated three times, with little griping, but producing great sickness and vomiting. She has taken a pill each night, and two spoonfuls of the mixture each morning, which have operated twice daily, without sickness. Cough well. Other circumstances as before. Pulse 72, and of natural strength. Skin cool.

℞ Limaturæ Ferri recentis ℥j.

Extracti Aloës spicatae ℥j.

Confectionis Rosæ Caninæ q. s. Ft. Pilulæ xx æquales. Sum^t unam primo mane et meridie quotidie.—Pergat in usu Pilularum ultimo præscriptarum.

May 22. She has had from two to three motions daily, having regularly taken the aperient pills. No cough. Her stomach and head are considerably better, but her difficulty and hurry of respiration on walking up stairs, together with the sallowness of her

skin remain as before. Pulse 84, and soft.—*Repetantur Pilulæ è Ferro, cum Limaturæ Ferri recentis* ℥iv. *Sumantur ut antea.*—*Pergat in usu Pilularum è Cambogiâ.*

May 29. Two or three days ago, she had for two days violent pain in the pit of her stomach and chest, without sickness. Bowels open twice a day. To-day she has had sickness, which she attributes to the commencement of menstruation this morning, of which it is a usual effect, and is accompanied with violent pain all round the loins. Other circumstances as before. Pulse 88, and rather hard.—*Pergat in usu medicaminum.*—*Utatur Pediluvio tepido singulis noctibus per horæ quadrantem.*

June 5. She has had from one to two motions daily, and experienced no return of the pain in her stomach, or sickness. She continued to menstruate for five days, in a proper and healthy manner. Head much better; but the breathlessness on strong muscular exertion, and defect of colour, continue. Pulse 84, and soft.—*Pergat in usu medicamentorum.*

June 12. She has had no return of pain in her head or stomach, and her breath is considerably better. Bowels open twice a day. She walks regularly every day. Pulse as before. Colour somewhat better.—*Pergat in usu medicaminum.*

June 23. Bowels generally open twice a day. Her breath on muscular exertion is much better, and her health in other respects perfectly good. Pulse 80, and soft.—*Pergat in usu medicamentorum.*

June 30. She began to menstruate on the 26th,

without sickness, but with a great deal of the usual pain across the loins, and extending round the corresponding part of the belly, which continued the whole day. The menses continued to flow properly, and she is otherwise perfectly free from complaints.

Cases of Chlorosis treated with Steel.—Sept 26, 1807. Amy W., aged twelve years and a quarter, a small girl, thin, for three months past subject to palpitation of heart, particularly in bed and asleep, waking her, and on going up hill, and up stairs; gradually increasing to this time. Appetite irregular. A motion every day; occasional pain in her stomach and bowels, with flatulency. Noise, giddiness, and pain in her head, with great beating and fulness of the carotids. Pale countenance as usual. Head and neck hot; but feet cold, and she is so chilly that there is no keeping her from the fire in the hottest weather. Tongue clean. No menses. Past three worms within these three weeks, teretes. Pulse 112, and moderately full.

R Limaturæ Ferri recentis (non rubiginis) ʒij.

Ft. Chartulæ xxiv æquales. Sum^t unam primo mane et merid. ex Gelat. Ribes.

Oct. 10. Pulse 84, and rather irregular. Bowels open once or twice a day as before. Rather more colour in her cheeks. Is considerably stronger and better than she was. Appetite tolerably good.—Pergat.

Case 2.—Oct. 6, 1807. Ruth H., aged twenty-one, a well made, handsome, stout, and full young woman, *mammis amplis et turgescens*, has not

menstruated for a year, except slightly for one day, two months ago. Pale and sallow. Violent headach, palpitation of the heart on walking or moving, appetite bad. Bowels open every day. Sick in a morning. Pulse 94, full and strong; but rather irregular. Sleeps ill. Legs swelled about a year ago. Pain in her limbs. No whites. Before the time of regular menstruation, since the obstruction, mammæ swell more than when regular; and much less pain and uneasiness of loins. Feet cold.—Calomel gr. iij. h. s. Pulv. Rhei gr. xv. cum Kali Vitriol. 3j. &c. cr. m.

Oct. 8. Medicine operated four times, without griping, but some sickness and vomiting. Sickness gone, and head much better. Pulse 84, and soft. Tongue clean as before. Appetite better.—Crast. nocte sumat Pil. et proximâ Aurorâ Haustum ad formam ultimam.

Oct. 11. Medicines operated well each time. Sickness better. Violent pain in her head yesterday in the morning, but better after the medicine operated, and well to-day. One motion to-day. Pulse 76, and full.—Sumat Limaturam Ferri ut antea præscriptam.

Oct. 20. Is a great deal better, and says she continues to mend. Begins to have some colour. Bowels open every day. Appetite good. No sickness. Pulse 68, soft, and slightly unequal. Headach in the morning for about half an hour, which then goes away.—Pergat.

Oct. 24. Looks considerably better, and says she is almost as well as ever she was in her life. Has not

menstruated. Pulse 68, and slightly irregular, but soft. Bowels open.—Rep^r Pulveres.

Case 3.—Oct. 15. Eleanor H., aged twenty-one, thin, pale, and delicate. For nearly three-quarters of a year, not so much menses as there ought to be, and rather pale, but at proper times. Shortness of breath, palpitation of the heart, occurring, whether on walking or sitting still; weak; pain of legs and back; great flatulency; sickness after eating; costiveness; beating in head and all over, with headach. Ankles slightly swelled within these three or four days. Bowels not open except from some Aloëtic pills. Pulse 120, and small. Tongue whitish. Appetite very good. Sleeps usually very well. Feet warm. Great pain in menstruation.—Sumat Limaturam Ferri.

R Aloës ʒj.

Extracti. Gent. ʒij. Ft. Pil. xx, j p. m. et h. s.

Oct. 20. Feels herself better, but still complains of shaking or trembling within. Pulse 108, and rather irregular. Tongue cleaner. Feet very cold; legs not swelled, and without pain. Pain in small of back continues. Occasional distention of stomach and bowels for an hour or two after eating, which requires her to undo her clothes.

Oct. 24. Pulse 100, and soft. Has had no pills since last report: having had them on the 8th. Better yesterday and to-day. More colour in cheeks.—Rept^r Pulv. è Ferro.

Oct. 29. Last night and to-day affected with great tightness in back, loins, and bowels, and

pain in head and breasts. No menses for more than five weeks. Bowels open. Pulse 80, and regular. Breasts never swell. Tongue slightly white.—Omitt' Ferrum.

One Inglis's pill every night.

Nov. 3. Better. Breath less short. Some palpitation. No pain of her legs. Less sickness. Bowels open. No headach. Pulse 90.—Pergat in usu Lim. Ferri.

Nov. 7. Has been worse. Spasms all over her. Sickness. Head has ached. Trembling. Pain in her back. Pulse 120. Not menstruated.—Pergat bis in die. Rept' etiam Pil. Al.

Nov. 13. Has been better ever since. Pulse 78. Bowels open.—Pergat.

Nov. 20. Has menstruated, but finds no difference in quantity or colour. In other respects better. Bowels open. Her headach is gone.—Pergat semel die.

Case 4.—Oct. 13, 1807. Hannah H., aged fifteen years and half. Not woman-like, but pale, and thin; of moderate stature. Never menstruated. Pulse 96, and rather hard. Tongue clean. Bowels open every day. Sick, faint, and giddy on exercise, with breathlessness and palpitation, especially on walking up stairs. Sleeps well. Appetite good. No headach.—Limatur. Ferri, &c.

Oct. 20. Pulse 84. Rather better. Some colour in her cheeks. Tongue clean and red. Bowels as before.—Pergat.

Oct. 24. Pulse 84, and slightly unequal. Is

considerably better in all respects. Bowels open. No headach. More colour.—Rep^r Pulv.

Oct. 29. A very bad headach for these two days past ; somewhat better to-day. Bowels open every day. Appetite good. Sleeps well. Stronger, and less breathlessness and palpitation than she had. Pulse 108, and hard. Tongue clean and moist. Considerable palpitation still of the heart.—Omitt^r Pulv.

Nov. 2. Headach better. Bowels open. Appetite good. Sleeps well. Palpitation better. Pulse 92. Tongue clean and moist.—Pergat in usu Pulv.

Nov. 17. Is better. Breath better. No headach. Bowels open. Appetite good. Trembling less. Pulse 96, (has just walked from Westgate-buildings.) Tongue clean. No sickness, giddiness, or faintness as before. Has not menstruated.—Pergat.

Case 5.—Oct. 20. Maria G., aged twenty-three, housemaid, once or twice a week out in open air. Extremely pale and sallow, rather fat, of middle size. Weakness and pain in her loins and legs; and breathlessness, with palpitation on exercise, affecting her head with pain and beating. Appetite rather defective; and acid in her stomach. Bowels open every day. Sleeps well and heavily. Legs swell at night. Regular as to period, but little and very pale.—Limatur. u. a.

Oct. 27. Feels herself somewhat better. Head less affected, and palpitation better. Bowels open. Appetite good; and sourness for two days less than it was. Pulse 100, and small. Expects to menstruate in four or five days.—Pergat.

Nov. 3. Better. Less weakness. Breath not so short "*by a great deal.*" Less headach and beating since she has taken the powders. Bowels open. Appetite good. No acidity. Legs do not swell. Has not menstruated. Pulse 84, and small.—Pergat.

Nov. 10. Is better in every respect. Head aches sometimes. Still some trembling. No pain in her back. Appetite good. Pulse 90. Bowels open regularly. Has had her menses in small quantity, and pale in colour.—Pergat.

Nov. 17. Is better in every respect.—Omitt' Pulv.

Nov. 25. Continues to mend.

Case 6.—Oct. 23, 1810. Sophia M., aged sixteen. Menstruated once last April, but never since, except a little tinge now and then. Pulse 114, soft and full. Skin cool. Skin and tongue pale. Mammæ parum elevatae. Sickness and headach. Palpitation on exercise. Pain in right hip. No swelling of legs. Bowels rather bound.—Calomel gr. iij. h. s. Infusi Sen. ℥jss. cr. m.

Oct. 25. Pulse 132, and small. Medicine operated four times, actively. Skin rather hot. Tongue clean. Head somewhat better; pain of hip better. Bowels not open to-day.

℞ Limatur. Ferri gr. iij.

Cin. gr. j. ft. Pulvis bis die su mendus.

Oct. 30. Pulse 118. Bowels bound. No stool since Sunday evening. Skin cool. Head rather better, and sickness less. Tongue clean.—Pergat in usu Limat. Aloës gr. jss. sing. noct.

Nov. 3. One pill operated tolerably, every day

once or twice. No headach this whole week. Pulse 98, and soft. Spirits better. Appetite good. Other things as before.—Pergat in usu Pulv. et Pilularum.

Nov. 10. Bowels regularly open. Pulse as before. Better in health, spirits, and colour.—Pergat in usu Pil. et Pulverum.

Nov. 17. Bowels open, from once to twice a-day, rather purging. Pulse 108. Skin cool. Colour, and other symptoms, much better.—Pergat.

Case 7.—Sept. 21, 1809. Anne R., aged twenty-three. A domestic servant. 'Till about two months ago was regular, and quite well, when, as she thinks from washing in cold water, the menses stopped suddenly after one day; and ever since has had no appearance. Very pale and sallow; with great hurry of respiration and palpitation, 'on the least exertion, together with beating up into the head on both sides. Appetite very bad; and she is frequently sick after eating, which often comes up again, especially if meat. Weak. No hysteria, but is faint at times. No headach, but sometimes giddiness. Bowels open every day. No flatulency. Pulse 104, and rather hard. Very sleepy. Ankles have swelled, but do not now.—Habeat Limatur. Ferri gr. iij. Sacchari gr. j. mane et mer.

Sept. 26. A violent headach on Saturday and Sunday, with giddiness, especially violent on stooping; but there is in it a more violent beating than before, though the pain is better. Pulse 108, and as before. Carotids very strong. Tongue clean. Bowels open every day. Sickness, with vomiting, for these two

days, immediately after eating her dinner. Appetite bad.—Omitt^r Pulv. Sumat Calom. gr. iiss. Extr. Col. comp. gr. iij. hâc nocte, et die Jovis.

Sept. 30. First dose operated several times, the second once. No motions on the other days, or this day. Breath and head much better, with less beating. Was sick and vomited yesterday before dinner, bitter. Pulse 96, and hard. Tongue clean.—Rep^r Pil. hac nocte et die Martis.

Oct. 5. Three motions from the first dose, two from the second. Sickness this morning, with some vomiting. No motions but from the Pills. Pulse 86, and soft. Head and breath much better, with rarely any palpitation. Menses are now present in a slight degree, and pale.—Rep^r Pilulæ crastinâ nocte et die Martis.

R Aloës Socotorinæ ʒj.

Conservæ q. s. sit. Ft. Pilulæ xx. æquales.

Sum^t unam sing. noct. h. s. præter noctes quibus Pil. aper. sum^t.

Oct. 12. Menses stopped the same day. Pills operated twice each time, pretty considerably; and the bowels have been open on the intermediate days once. Pulse 96, and soft. Head and breath much better.—Pergat.

Oct. 19. First dose, on Monday night, operated three times; the second, on Sunday night, once. A good deal of pain across the stomach. Bowels open all the intermediate days. Head and breath well. Pulse 96, and full. Colour much better.—Pergat per hebdomadam.

Oct. 26. Pills made her sick, and griped her very much on Sunday. She is, however, a great deal better. No menses.—Omitt' *Pilulæ è Calom.* Pergat in cæteris.

Nov. 2. Menses came on yesterday, and now continue. Much better. Pulse between 80 and 90, and soft. Bowels open every day.—Pergat.

Nov. 9. Menses continued for two days only. Was sick and vomited yesterday. Bowels have been open every day.—*Cal. et Extract. u. a. hac nocte et die Solis.* Pergat in usu *Pil. Aloët.*

Nov. 16. Medicine operated four or five times. Yesterday had, as she tells me, some dark coloured vomiting, very sour and bitter; but her bowels are open every day, and she feels much better than she was. Pulse 108.—*Pil. u. a. Potass. Carbon. ʒss. bis die ex Aquâ Menthæ pip.* Let her drink no tea, and eat no toast, or acids.

Nov. 23. Has been open several times, from the medicine only. Pulse 96, and small, (walks to me, a good way.) Bowels open.—Pergat.

Nov. 30. Menstruated on Friday and Saturday, of a proper colour. Used to be so three or four days. Had a pain in the pit of her stomach yesterday and to-day. No motion these two days. Breath and head quite well. Pulse as before. Takes one pill every night.—*Pil. è Cal. c Extract. Col. c hac nocte et die Martis.* Sum' *Pilulas duas ex Aloe sing. noct.*

Dec. 7. Bowels open four or five times on the first, three times on the second; other days open. Has had great pain in her stomach and bowels. Colour as

before. No headach. Pulse 120; but she is flurried. Tongue clean. Appetite good. Sleeps well.—*Ferri Limaturæ præp. gr. iij. bis die. Pil. Aloës u. a.*

Dec. 14. Bowels open every day. Pain of her stomach less; and she is otherwise much better. No headach. Pulse 96, and soft.—*Pergat.*

Dec. 21. Bowels regular. Pulse 84. In every respect much better. Menstruated for two days this week, properly.—*Pergat.*

Jan. 4. Has had great sickness during the past week. Bowels open every day. Begins to have a rosy colour in her cheeks. Head well. Pulse 84, and soft.—*Pergat.*

Case 8.—*Eliz. M.*, aged twenty-six, kitchen maid, taking very little exercise in the open air. Has menstruated very irregularly for two years past, having experienced deficiency as to quantity, colour, and period. Her complexion is pale and sallow. Pulse 112, weak, and small. Has great breathlessness and palpitation on exercise, together with aching of the limbs, and slight swelling of the ankles. Is free from headach and giddiness. Has occasional sickness, though her appetite is good; she has a stool usually every day, and is free from flatulency. Tongue pale and clean. Is very weak. Sleeps well. Has had a cold for this fortnight, accompanied with some cough, without expectoration or pain of the side. Heart not palpitating while at rest,

& *Hydrargyri Submuriatis gr. iij.*

Confect. Rosæ caninæ q. s. sit. Ft. Pilula,
horâ somni sumenda.

R Infusi Sennæ ʒix.

Tincturæ Sennæ ʒj. M Sumt. proximâ Aurorâ.

Nov. 7. Had six motions from the draught on Sunday morning. Bowels open yesterday and to-day. Ankles considerably swelled. Pulse 100. Symptoms as before.—Limaturæ Ferri recent. gr. iij. primo mane et meridie per quatrimum.

Nov. 16. Bowels open every day. No headach. Pulse 108, (but she walks a great way to me). Breath much better,—Pergat in usu Pulv. ter die.

Nov. 23. Head well. Bowels open. Continues to breathe better. Pulse 84, and soft. Colour much improved.—Pergat.

Nov. 30. Menses returned properly a few days ago. A great deal better. Colour nearly returned to the natural state. Pulse 72, and soft. Bowels open every day.—Pergat per hebdomadam.

Dec. 7. Colour natural, and health good. Cured.

END OF VOL. II.



Chlorophyll

It is the green color of plants, due to the presence of chlorophyll. It is a green pigment found in all green plants and is essential for photosynthesis. Chlorophyll is composed of a central magnesium atom surrounded by four nitrogen atoms, which are further surrounded by a ring of carbon atoms. This ring is attached to a long side chain, which is the part of the molecule that is embedded in the cell membrane. The side chain is made up of a series of isoprenoid units, which are derived from the same precursor as the carotenoids. The chlorophyll molecule is therefore a complex of a central metal atom, a ring of nitrogen and carbon atoms, and a long side chain of isoprenoid units. The chlorophyll molecule is responsible for the green color of plants and is essential for the process of photosynthesis. It is found in all green plants and is also present in some algae and cyanobacteria. The chlorophyll molecule is a complex of a central metal atom, a ring of nitrogen and carbon atoms, and a long side chain of isoprenoid units. The chlorophyll molecule is responsible for the green color of plants and is essential for the process of photosynthesis. It is found in all green plants and is also present in some algae and cyanobacteria.

