

Practical remarks upon indigestion : particularly as connected with bilious and nervous affections of the head, and other parts : including observations upon the disorders and diseases of the stomach : and superior parts of the alimentary canal : illustrated by cases / by John Howship.

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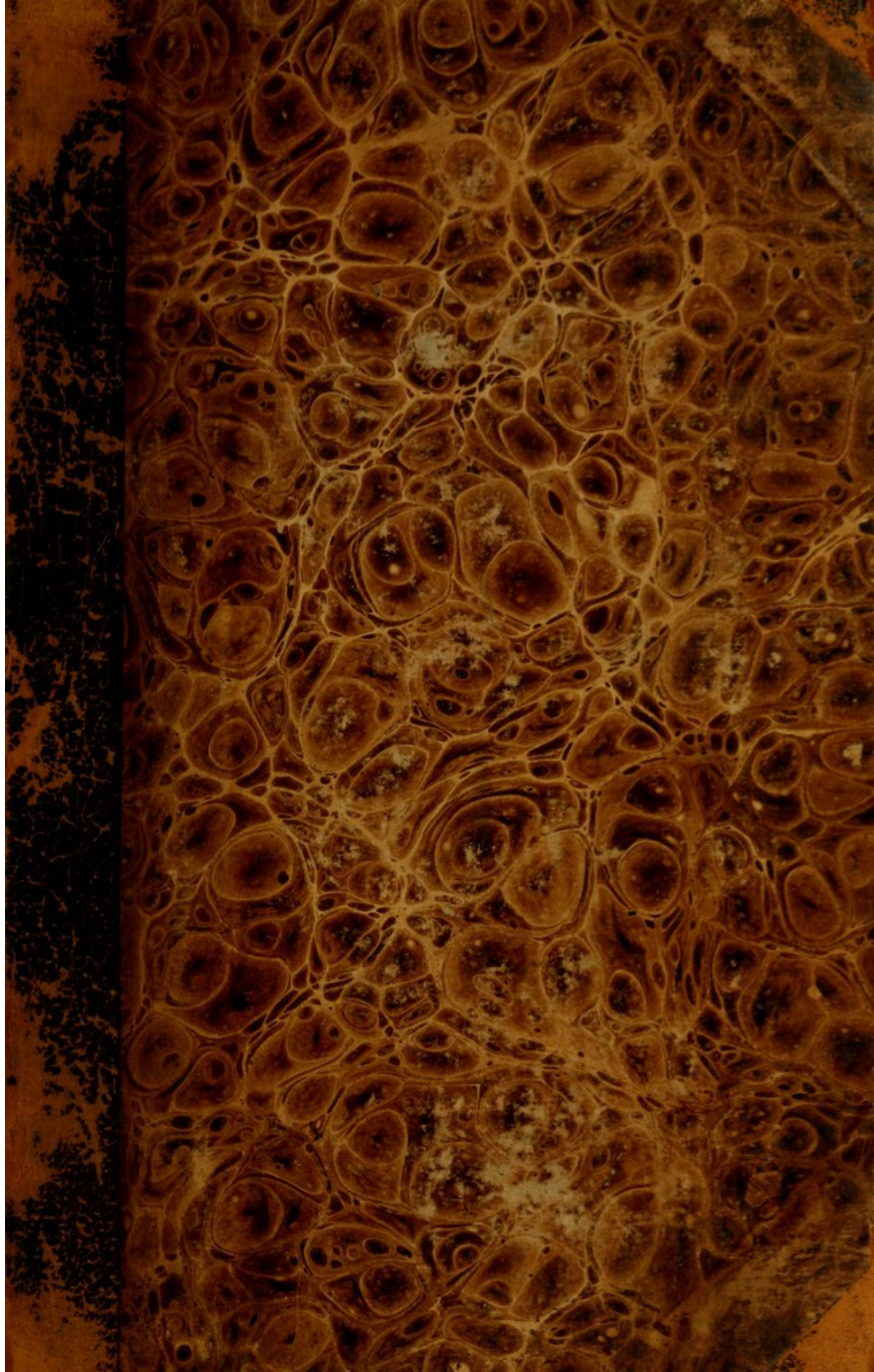
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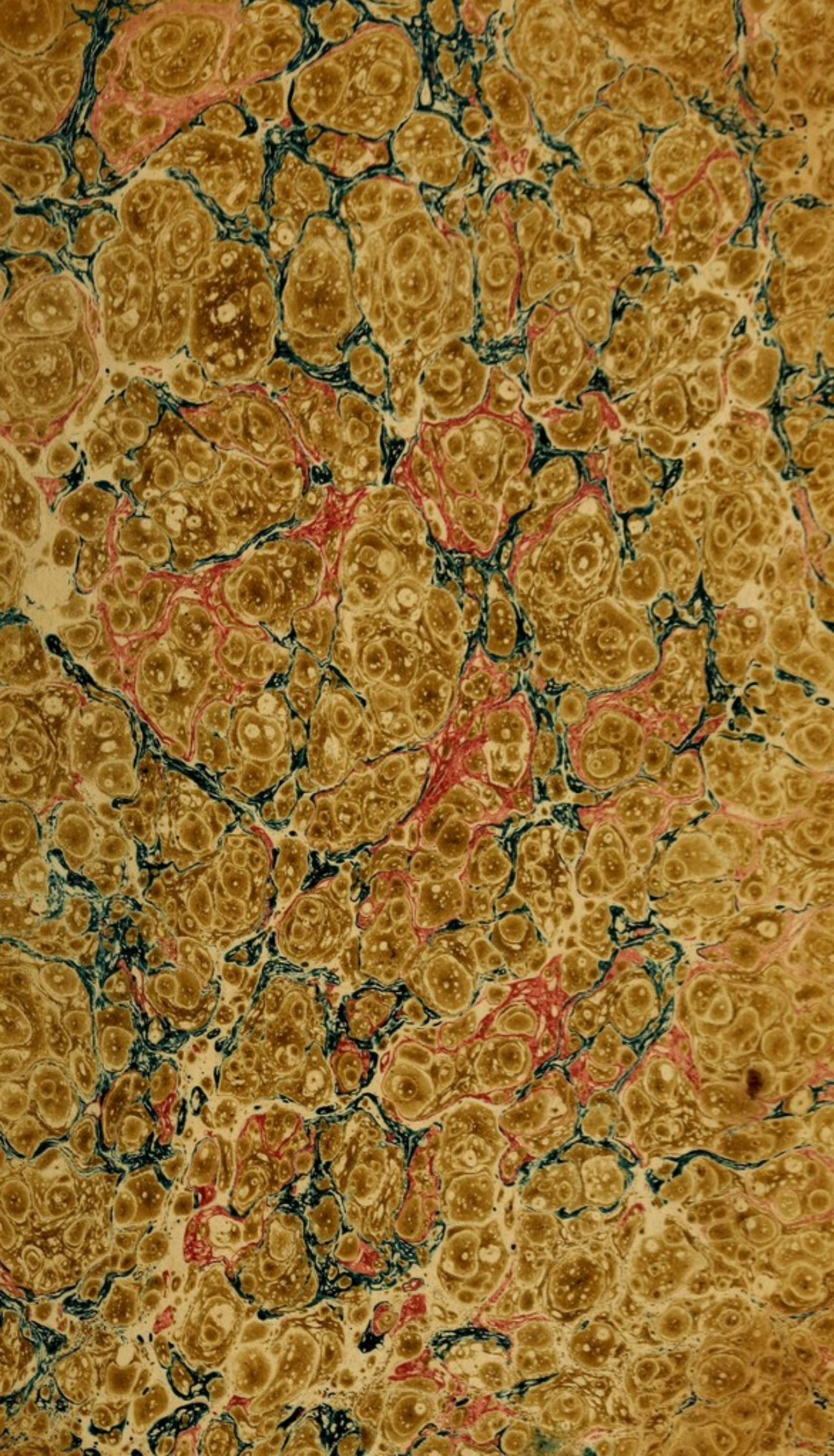
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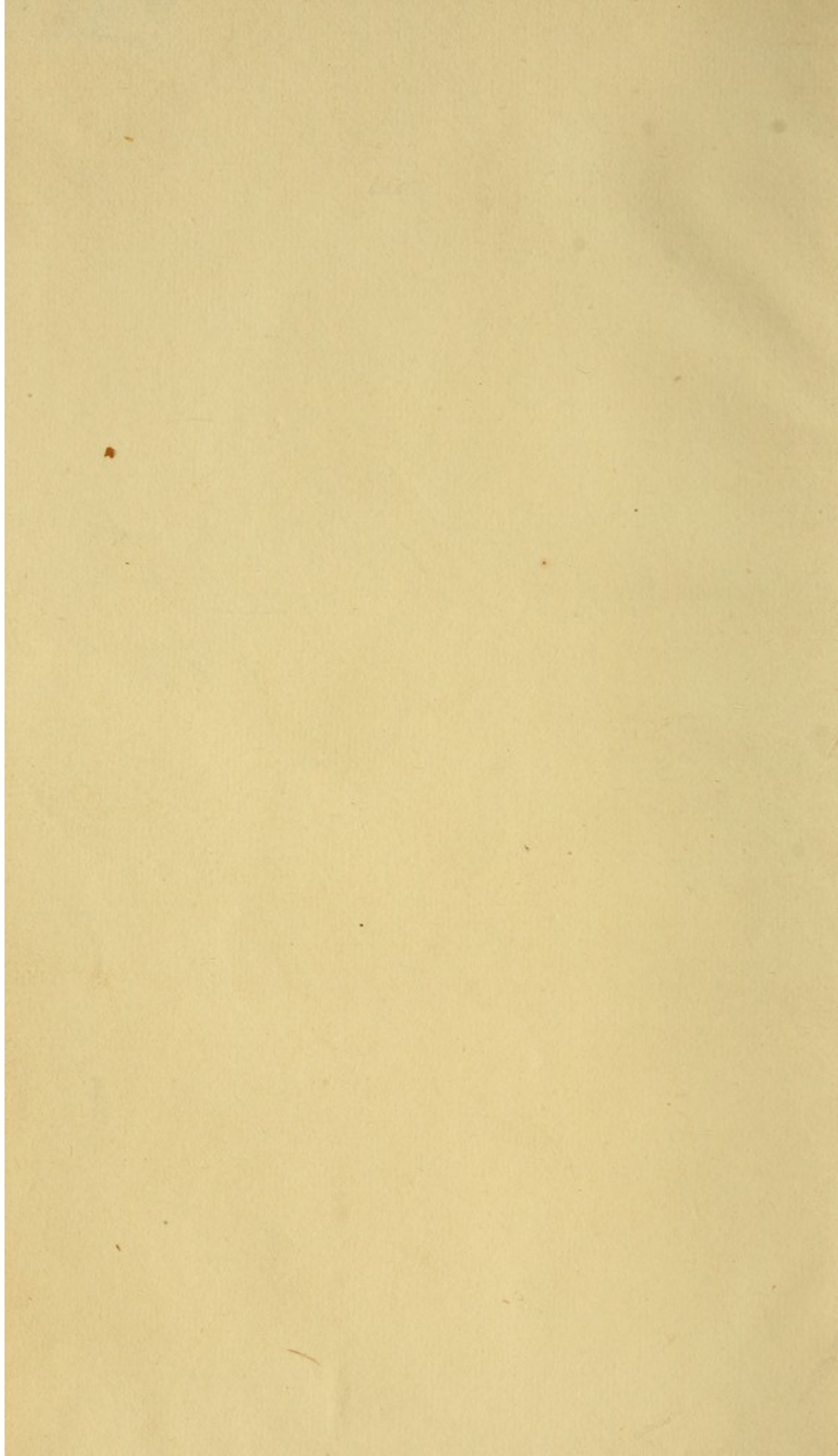
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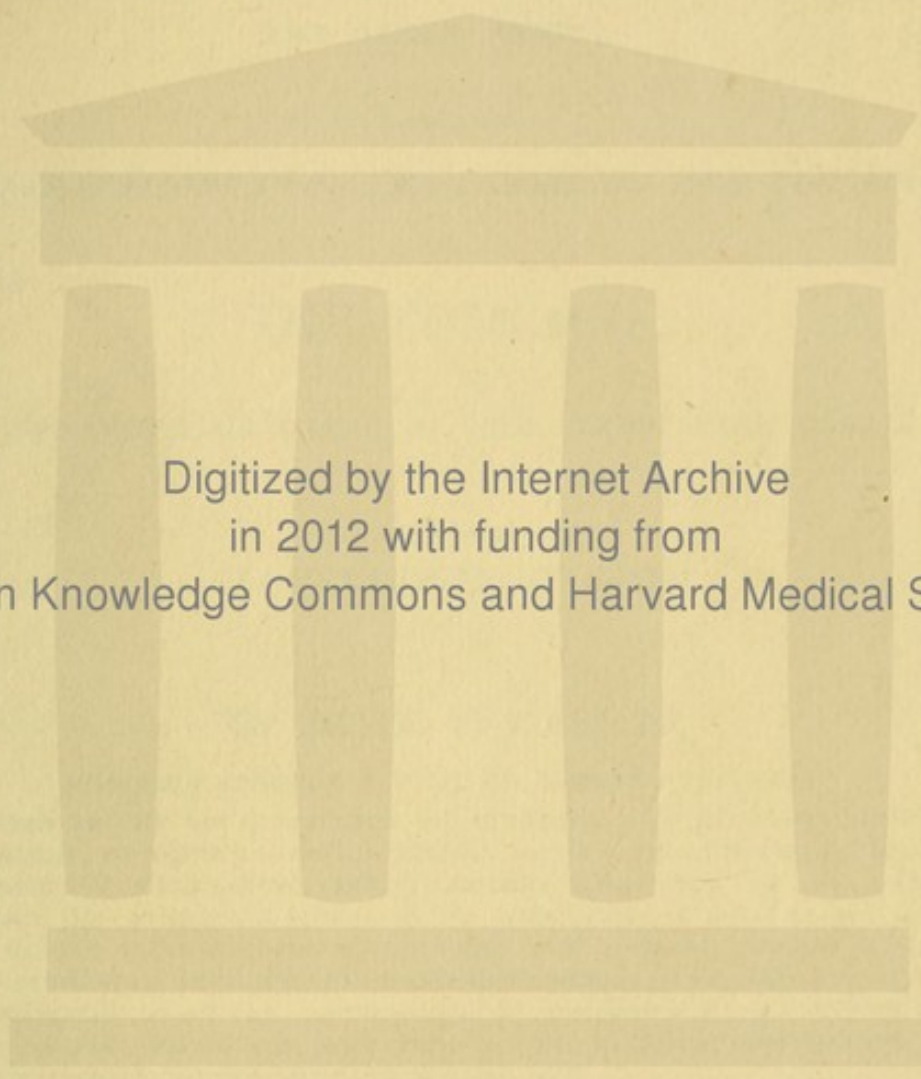
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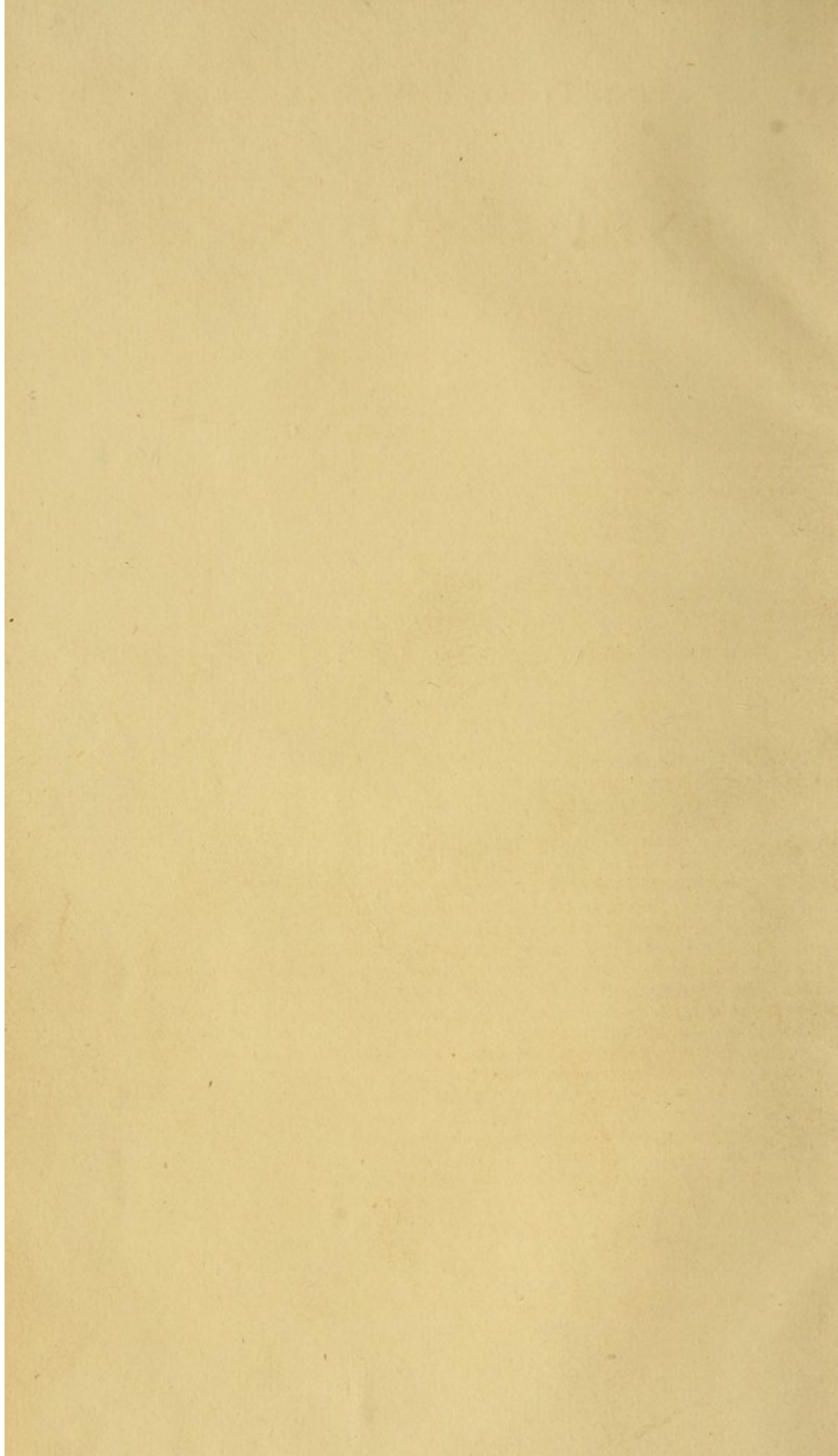
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PRACTICAL REMARKS
UPON
INDIGESTION;

PARTICULARLY AS CONNECTED WITH
BILIOUS AND NERVOUS AFFECTIONS OF THE HEAD,
AND OTHER PARTS;

INCLUDING
OBSERVATIONS UPON THE DISORDERS AND DISEASES

OF

THE STOMACH;

AND SUPERIOR PARTS OF THE ALIMENTARY CANAL.

ILLUSTRATED BY CASES.

By JOHN HOWSHIP,

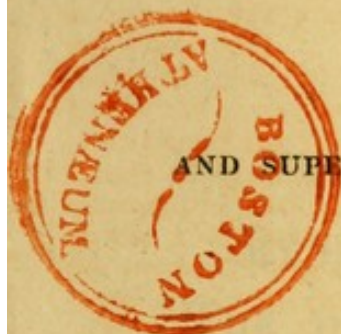
ASSISTANT SURGEON TO THE ST. GEORGE'S INFIRMARY;
MEMBER OF THE ROYAL COLLEGE OF SURGEONS, AND MEDICO-CHIRURGICAL
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POUR LES SCIENCES NATURELLES ET MÉDICALES, A DRESDE; ACADEMIA
CÆSAREA NATURÆ CURIOSORUM, BONN; AND SOCIETATIS REGIÆ MEDICÆ,
COPENHAGEN. AUTHOR OF PRACTICAL OBSERVATIONS IN SURGERY AND MORBID
ANATOMY; PRACTICAL OBSERVATIONS ON THE DISEASES THAT AFFECT THE
SECRETION AND EXCRETION OF URINE; AND PRACTICAL OBSERVATIONS ON
THE DISEASES OF THE LOWER INTESTINES, &c.

LONDON:

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LONGMAN, HURST, REES, ORME, BROWN, AND GREEN,
PATERNOSTER-ROW.

1825.



INDIGESTION;

ROBERT HOOPER, M.D. F.R.S.

BACHELOR OF PHYSIC OF THE UNIVERSITY OF OXFORD;
 MEMBER OF THE ROYAL COLLEGE OF PHYSICIANS;
 PHYSICIAN TO THE MARYLEBONE INFIRMARY;
 OBSERVATIONS UPON TWO DISORDERS AND DISEASES

THE STOMACH;

AND OTHER PARTS OF THE ALIMENTARY CANAL.

1892

MY DEAR SIR,

The particular kindness you have shewn me, upon this and many other occasions, demands my warmest thanks; although it is only a continuation of the same; even time of regard, with which you have now for very many years been pleased to honour me. In the present Essay I fear that You who have so long and so successfully trodden in the steps of that universally respected friend of Truth, of Science, and Humanity, the late Dr. Baillie, will see little, very little, deserving of notice. I could wish it were otherwise, and I should be enabled to

LONDON
 Printed by A. & R. Spottiswoode,
 New-Street-Square.

TO

ROBERT HOOPER, M.D. F.L.S.

BACHELOR OF PHYSIC, OF THE UNIVERSITY OF OXFORD;

MEMBER OF THE ROYAL COLLEGE OF PHYSICIANS;

PHYSICIAN TO THE MARYLEBONNE INFIRMARY,

&c. &c. &c.

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me to render it less unworthy of your good opinion.

One happiness, however, is not denied me in placing this little work under your patronage; it is that of assuring you in the grateful acknowledgment of numerous flattering memorials of personal attention, and professional confidence, that

I remain,

Dear Sir,

Yours faithfully,

JOHN HOWSHIP.

George-Street, Hanover-Square,

May, 2, 1825.

INTRODUCTION.

THE object of the following work is to present the reader with a concise and practical account of some of the most frequent disorders of the stomach, as connected with indigestion, or dyspepsia; including a few preceding remarks upon the occasional deviations from health, to which the throat and œsophagus are exposed.

In reference to each of its departments, perhaps, Science may be said to be still progressive; but this is particularly true as regards the wide field of Pathological research, in which there are many paths not yet satisfactorily explored, and not a few the course and termination of which may be considered as absolutely unknown.

The clear discrimination of the various complaints to which every particular organ may be liable, is upon many occasions not less difficult than important. The occasional uncertainty of symptoms is a fruitful source of doubt and error; such also, is the sympathetic disturbance and mischief often excited in distant parts, which frequently exhibit their symptoms evidently enough, while

those that might direct the attention to the seat of the primary or principal malady, are scarcely discernible. Upon some occasions, the patient's own opinion of his complaint leads him to state his feelings incorrectly; while, upon others, we are ourselves subject to be led into error by attachment to some favourite doctrine. These, which are some few of the difficulties that oppose our progress at every step will, I hope, plead in apology for the defects that may, perhaps, be found in the present essay.

The following remarks were, in the first instance, intended to include only such as I have myself had the opportunity of making; but these means were too scanty, and occasional recourse has therefore been had to the experience of others, with a view to give continuity, as well as additional value, to the series.

The natural order of the subject appeared to require that affections of the throat should have the first place; these, therefore, are included in the first PART of the Series. The second PART is devoted to the consideration of the various complaints that more immediately regard the stomach, whether confined to disorder, or going on to disease.

The commencing portion of each Part enumerates the symptoms, specifies the causes, and states the appearances, that occur in each particular affection; the concluding remarks being appropriated to the treatment.

For many favourable opportunities of observing the progress of disorder, or learning its results, I

am proud to acknowledge my continued obligations to the kindness, friendship, and patronage of Mr. HEAVISIDE; the interesting contents of whose invaluable Museum, together with other important sources of information, have been freely and most liberally laid open to me. Neither can I forget, that for many important observations upon this, as well as upon other occasions, I am indebted to the kindness of my respected friend Mr. BARROW, with whom the perpetual fatigue and anxiety of incessant and extensive occupation are forgotten, the moment an opportunity presents for making any inquiry likely to advance the progress of science, or conduce to the benefit of society.

I may, perhaps, venture to hope, that in what relates to the influence of intemperance upon the brain, in what regards the condition of the brain in some dyspeptic affections, in what respects violent attacks of spasmodic pain at the stomach, in reference to certain complicated bilious and hepatic complaints, and in some other particulars; the following remarks may not be found entirely devoid of interest.

I am proud to acknowledge my continued obligations to the kindness, friendship, and patronage of Mr. Huxley; the interesting contents of whose invaluable *Manual of Zoology* and other important sources of information have been freely and most liberally placed at my disposal. I can only regret that for many important observations upon this as well as upon other occasions, I am indebted to the kindness of my friend, Mr. Huxley, with whom the perpetual fatigue and anxiety of incessant and extensive occupation are for so long the momentary opportunity presents for making any inquiry likely to advance the progress of science or contribute to the improvement of mankind.

ERRATUM.

Page 88. — bottom line, for 233. read 223.

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PRACTICAL

REMARKS, &c.

PART I.

1. **THE** membranous and muscular expansions within the mouth, forming the soft palate, uvula, and fauces ; and, in fact, the whole line of the alimentary canal, are subject to the effects of diminished tone or relaxation ; and also, to the consequences of increased tone, disposing to inflammatory action. Each of these states occasionally gives rise to disease, the ultimate consequences of which not unfrequently prove as unmanageable as they were unexpected.

2. One of the most frequent effects of diminished tone, in these parts, is a relaxation of the uvula, which, suspended from the centre of the posterior margin of the soft palate, is in some states of constitution extremely apt to become elongated. It may thus become a source of inconvenience, sometimes occasioning serious and even alarming complaints.

3. Under a moist atmosphere and in damp situations, I have observed this occurrence most frequently ; although it sometimes occurs where the habit is otherwise evidently relaxed, independent of these circumstances ; producing complaints of irritation to cough, and occasionally, more or

less sickness at stomach. Neither are these the only ill-effects induced by this apparently trivial disorder; as in one instance I have seen it bring on a very tedious dyspeptic affection, with constant tickling cough, loss of flesh and strength, and in fact every indication of progressive decline.

4. From the seemingly slight and unimportant nature of this cause of irritation, it has too frequently been either entirely overlooked or treated with indifference. Whereas the impression left on my mind, in one instance (Case 1.) was, that upon every occasion where a patient complains of irritation and tickling cough, the throat should be immediately inspected. This examination is much more to be depended on than any verbal enquiry persons are sometimes unconscious of the circumstance, though it exists, and such have, previous to examination, assured me they had no complaint in the throat.

5. A tendency to relaxation of the mucous membrane, lining the alimentary canal, connected with a greater or less degree of œdematous effusion into the relaxed cellular texture behind it, gives rise to polypose excrescences in the cavities of the nose, fauces, and œsophagus, as well as in the stomach and inferior parts of the intestinal canal; especially conducing, in the latter case, to the production of one of the most irksome and harassing infirmities to which the human body is liable, — prolapsus of the rectum; a complaint, the nature and cure of which have been pointed out in a preceding essay.*

6. The tonsils, situated laterally in the back part of the throat, and consequently, in a circumscribed space, are exposed not only to all the affections to which the other parts within the mouth are liable; but where much swelling is induced, this

* Practical Observations on the Diseases of the Lower Bowels and Anus. Third edition. Longman and Co.

circumstance alone may become of the most serious importance, by impeding respiration, and preventing the patient from taking nourishment.

7. Enlargement of the tonsils is now and then attended with scarcely any decided character of inflammatory action; most commonly, however, the symptoms of inflammation are present, especially at the onset, sometimes accompanied with fever. The genus of disease of which the inflammation of the tonsils is a species, is well described by Dr. HOOPER, as "known by pain and redness of the throat, attended with a difficulty of swallowing and breathing. The inflammation principally occupies the tonsils; but often extends through the whole mucous membrane of the fauces, so as essentially to interrupt the speech, deglutition, and respiration, of the patient." *

8. Among the causes that most frequently give rise to this complaint, mentioned by Dr. HOOPER, are, exposure to cold from sudden vicissitudes of weather, currents of cold air, wearing damp linen, sitting in wet rooms, or getting wet in the feet, all which circumstances may give a sudden check to perspiration.

9. Inflammatory sore throat usually discovers itself by difficulty in swallowing and breathing, with redness and tumour in one or both tonsils, dryness of throat, foul tongue, lancinating pains in the parts affected, difficult excretion of mucus, with some degree of fever. According to the excellent authority just mentioned, as the disease advances, the difficulty of swallowing and breathing becomes greater, the speech is very indistinct, the dryness of the throat, and thirst, increase, the tongue swells and becomes crusted with a dark fur, the pulse is full and frequent. In some cases a few white sloughy spots are observed on the tonsils. If the inflammation proceeds to such a height as to put a

* Hooper's Medical Dictionary. Fourth edition.

total stop to respiration, the face will become livid, the pulse will sink, and the patient will quickly be destroyed.

10. The principal danger in this complaint is, that the increasing tumor in the tonsils may at length prevent sufficient support being given, or induce suffocation; these events, however, are very rare, provided early and proper attention be paid to the treatment.

11. Where the constitutional powers are defective, the symptoms will be variously modified; the fauces will frequently, with a sense of soreness, exhibit numerous specks, connected with great debility of system, and a small fluttering pulse; while in the inflammatory sore throat, the difficulty of swallowing is greater, the tumor more considerable, and the tendency to suffocation more distinct. The present or low species, forming the ulcerated, sloughing, or putrid sore throat, frequently makes its appearance as an epidemic, depending on a peculiar state of atmosphere, and principally attacking those of weak and relaxed habit.

12. It almost constantly happens, that even the most severe attack of inflammation in the throat, stomach, or bowels, is principally confined to the parts in which it commenced. A remarkable instance, however, to the contrary, is mentioned by the late Mr. WATSON, who, July 3. 1765, opened the body of a man, at the Westminster Hospital, who died from a mortification in the œsophagus, stomach, and intestines, in consequence of an inflammation extending itself through the whole of the canal. The other viscera were in appearance pretty sound; though the gall bladder contained, large and small, a prodigious number of stones.

13. The tumid state of the tonsils in inflammatory sore throat, may, by the adoption of proper means, be either removed or relieved (63.); but it now and then proves otherwise, especially in weak

and relaxed habits. Although the feverish symptoms be removed, the consequent tumor remains, and may not only continue as an inconvenience, but slowly increase, until, without local pain, the same distressing and alarming consequences take place that have been already pointed out, as the occasional attendants upon acute inflammation. Several such cases I have seen, all in females of delicate constitution; and all the result either of fever or severe cold. The most remarkable of these was one in which it was eventually necessary to prevent more serious consequences by an operation, by which the largest of the two tumors was removed; which operation, although one of considerable difficulty, succeeded most happily. Some further remarks on this subject will be made under the head of treatment (69.).

14. Tumors, productive of all the inconveniences of partial obstruction to the passage through the throat, now and then form behind the membranous lining of the fauces and pharynx, apparently originating in the cellular tissue. A specimen of this kind of disease, in the collection at St. Bartholomew's Hospital, exhibits a very large sarcomatous tumor, appearing to arise from between the coats at the posterior part of the pharynx. It projected forward towards the larynx, impeding respiration, and was at one time the subject of consultation for removal. The patient at length died, worn out by irritation. On examination, the tumor was found to have made its way upwards against the basis cranii, which removed by absorption, it continued to make its way, pushing the dura mater before it into the brain. To permit this intrusion, it was necessary that many ounces of the substance of the brain should be removed by absorption; and notwithstanding this change took place, it is extremely curious that the mental powers remained perfectly undisturbed to the last.

15. The progress and course of the effects of

violent inflammation of the throat, is much influenced by circumstances. The excitement attendant upon the exanthemata, appears to be principally confined, in its effects, to the internal membrane lining these parts. It has been disputed, and denied, that the eruptive action in small pox ever extends itself into the throat; but there is in Mr. HEAVISIDE'S Museum, a preparation which establishes the fact, at least as an occasional occurrence. It is the œsophagus of a person who died of small pox, shewing very distinct pustules on its internal or cuticular surface. I had an opportunity, in *December*, 1808, of examining the alimentary canal in a young man who died from confluent small pox; and made drawings, at the time, of the appearances observed in the œsophagus, stomach, and intestines. The disease was ushered in by acute pain and oppression in breathing, sore throat and fever. At the turn of the eruption the pulse suddenly became weak and rapid; and the bowels, previously irritable and relaxed, became torpid. Every effort to support the strength failing, he sunk, and died. From the early relaxation of bowels, and especially from the alvine discharges having been extremely foetid, it was not expected these viscera would be found healthy. On examination of the body, many pustules were found in the mouth and upon the tongue; one small apparently pustular ulcer was detected in the pharynx, and none beyond it. The œsophagus, stomach, and intestines, exhibited only the appearances of inflammatory irritation most strongly marked upon their internal surface.

16. The inflammatory action connected with putrid fever is extremely prone, on particular occasions, to run into extensive ulceration. There is a preparation in Mr. HEAVISIDE'S Museum, of the pharynx, œsophagus, and trachea of a child, who died of a putrid fever, with ulcerated sore throat; where the whole internal surface is in a state of ulceration, from the basis of the tongue to the

lower end of the œsophagus, and also of the trachea.

17. Where the preceding symptoms of inflammation (9.) have been either neglected or have been unusually severe, the extreme irritability of some one part may run on to suppuration, if upon the internal surface of the canal, inducing ulceration; if in the cellular tissue external to it, producing abscess.

18. The importance of these events, when they do occur, will so completely depend on the nature of the cause, the seat and extent of the affection, as well as the state of constitution, as to render it impossible to lay down useful general rules for opinion upon this head. Several instances I have seen, and one I shall briefly state, where abscess, formed either between the coats, or close to the sides of the œsophagus, breaking into the canal, healed, and left the functions of the parts unimpaired (Case 3.); but most commonly the event proves less favourable.

19. In several instances I have seen neglected inflammation, induced by accidental injury to the coats of the œsophagus, end in permanent stricture of the canal, or in extensive abscess seated in the cellular texture (Case 4.). The state of the constitutional health will especially tend to regulate the progress and event of inflammation, from whatever cause it may arise; but where, in good health, this action has been long neglected, irreparable mischief may be the consequence; and when too late, the patient's mind takes alarm, every effort in the way of treatment may fail to remove or relieve the malady.

20. In one such case, a very obstinate and long disregarded cold and sore throat, settled a state of permanent irritation upon the membrane lining the upper part of the larynx and epiglottis, and this inducing a morbid secretion from the surface, at length went on to ulceration, by which the epiglottis

was eventually destroyed ; attended with a train of most distressing symptoms, beyond the power of art materially to relieve. It is upon these occasions, that the consequences of early neglect in the patient are attributed unjustly to the imperfect state of professional knowledge (Case 5.). A preparation in Mr. HEAVISIDE'S Museum, exhibits the pharynx in the highest state of ulceration ; the arytenoide cartilages are ossified and denuded, the disease destroyed by inanition. Another demonstrates, an extensive ulceration of the œsophagus, destroying its coats, and forming an opening into the lungs ; the patient died from want of support. In this kind of disease, the difficulty in swallowing often depends partly on spasmodic stricture, induced in the œsophagus ; although the agony excited by the passage of food over the epiglottis where there is no stricture, is sometimes so insupportable, as to disable the patient from making the attempt to swallow, by depriving him of all courage.

21. An interesting case of ulcerated œsophagus is mentioned by the late Mr. WATSON, who says : “ I visited a gentleman who laboured under a most severe difficulty in swallowing, which had been gradually coming on for some weeks. Whenever he took a little fluid, as a teaspoonful of warm milk, it would stop about the middle of the œsophagus, and after remaining there about a minute, was returned with a quantity of viscid purulent mucus. When he had two or three times returned the fluid attempted to be swallowed, the passage seemed a little cleared, and then perhaps a teaspoonful of milk would pass down into the stomach. He strained much in bringing up the mucus, and this always fatigued him greatly. His nourishment had for some time been principally derived from glysters. We gave him a teaspoonful of crude mercury, and it passed, and was found in his stools ; but he still returned his milk, broth, or toast and water, as usual. He died a few days after I saw him,

worn out with fatigue and inanition. He died at 7, A. M.; and at 2, P. M. was opened. We found a large ulcerated surface in the œsophagus, opposite the division of the trachea; the borders of this ulcer were adherent to the membranous surface of the trachea; and the whole ulcer was filled with spongy flesh, so that scarcely any passage was left. The ulcerated part of the œsophagus was distended into a pouch, the size of a hen's egg. The mercury passed merely by its weight, and therefore much sooner than those watery fluids that were comparatively light. There were pretty strong adhesions of the lungs to the pleura, and every mark of the case having originally been one of inflammation."

22. In the large and splendid work of the late Dr. BAILLIE*, is a specimen, from Dr. HUNTER's Museum, of ulceration in the upper part of the œsophagus, with scarcely any thickening, extending three or four inches along the canal; at the lower part, by ulceration extending in the cellular tissue, the inner membrane is partially separated, and thrown across the canal, so as to produce all the inconvenience of stricture, from a kind of valvular obstruction. In the same valuable work is also a preparation selected from Mr. HUNTER's Museum, of a contraction with considerable thickening, at the superior part of the œsophagus, with ulceration of the inner membrane above it. The stricture is almost impervious; but it only includes about half an inch, in extent, of the canal.

23. One occasional cause of difficult deglutition, it may be right to mention, as it produces all the distress of actual obstruction, and is also an affection of that part of the canal now under consideration; although it is neither contraction nor disease of structure, but only a paralytic state of the œsophagus. This kind of difficulty in swallowing may occur at an early period of life, or may take place on the approach of old age,

* A Series of Engravings illustrative of Morbid Anatomy.

most commonly from some preceding paralytic complaint.

24. Where this loss of power arises in early life, it is generally consequent to some severe attack of putrid or other typhoid fever, especially affecting the alimentary canal, and eventually leaving the muscular power of its various parts low and exhausted. In those cases in which it follows an apoplectic or paralytic attack, its most evident operation is usually that of rendering the act of deglutition feeble and imperfect; the unhappy patient being thus perpetually exposed to the risk of sudden death, from suffocation.

25. The act of swallowing is a complicated process; for while by one set of muscles the tongue and larynx are drawn forwards, and the epiglottis depressed, closing the passage to the lungs, by another the soft palate is so disposed as to shut up the posterior nostrils, the joint effect of both these actions being to enlarge the opening of the pharynx; and as the morsel descends into the pharynx, the progressive contraction of that cavity, the last in this series of actions, follows it down the Œsophagus into the stomach.

26. While the nervous and muscular energies remain perfect, the above complex action takes place with all the facility and promptitude of the most simple movement; although from the above mentioned causes it is always liable to become embarrassed. I have seen repeated instances of difficulty in swallowing, from paralysis. In one instance, not very rare, a person who had suffered a translation of gouty action to the brain, could never afterward swallow without the dread and danger of being suffocated. In its passage into the Œsophagus, a part of the food frequently insinuated itself into the opening of the larynx. The immediate consequence of this accident was always a convulsive and terrible fit of coughing; during which the face became turgid with blood, and he

totally lost all power of speech, which he rarely recovered in less than half an hour.*

27. There are in Mr. HEAVISIDE's Museum, two preparations illustrative of the operation of this kind of difficulty, as a cause of sudden death. The appearances in both are the same. One of the two was a person to whom I was called: although too late. An old man, who had previously suffered slightly from paralysis, fell from his chair senseless, while eating his dinner; and suddenly expired, in a fit, as was supposed. On my arrival, the poor man was dead; the face livid, the limbs stiffened, and the body nearly cold. On subsequent examination, I found a large mass of imperfectly chewed beef, in making its way down the throat, had passed partly into the pharynx, but principally behind the epiglottis into the larynx, which cavity is entirely filled with it. This accident must, of course, have induced instant suffocation.

28. The existence of that particular variety of palsy of the œsophagus, induced by febrile action, may sometimes be satisfactorily ascertained by the history, together with the difficulty in swallowing being the only complaint; it can however be at once determined by passing an instrument into the throat, which examination, if properly conducted, will clearly prove the canal free from actual obstruction.

29. An occasional cause of difficulty or loss of power of swallowing, is mentioned by Dr. BAILLIE; although whether this cause operates by exciting spasm, or inducing paralysis, is not yet determined. "In some instances where the cartilages of the larynx have been converted into bone, there has occurred a total inability of swallowing, which de-

* The complete history of this case, in several respects interesting, but in one particular extremely singular, is given (Case 33.) in the Practical Observations in Surgery and Morbid Anatomy.

stroyed the patients. Upon examination after death, no disease was observable either in the pharynx or œsophagus. How this should happen it is very difficult to explain ; but it has been observed by Dr. ROBERTSON, of Greenwich Hospital.” *

30. Another occasional cause of obstruction in the œsophagus, independent of stricture, is the production and growth of a polypose tumor, generally attached by a narrow neck, to the internal surface of the canal. The existence of this disease, which happily is a very uncommon one, cannot always be determined with precision, except where from its seat or advanced growth, it is occasionally brought into view in the throat. Of this description, is a highly instructive case, related by Dr. MONROT†, of a man, in whose throat nothing particular could in general be seen ; yet, on inducing vomiting, a large fleshy excrescence was thrown up into his mouth, as far as the fore teeth ; the texture was firm, fleshy, and elastic. As this substance, when so thrown forward, shut up the larynx, and prevented breathing, he could never retain it there above half a minute. This polypus for years rendered swallowing difficult, breathing less free, and speaking less distinct ; frequently exciting cough, which often forced the polypus into his mouth. A large portion of this polypus was removed by a ligature, applied as low as possible in the throat ; but the patient, progressively emaciated, and for many months only able with great difficulty to take liquids, within two years died. On dissection, the œsophagus was found greatly dilated by a large fleshy excrescence, attached by a single root to its fore part, about three inches below the glottis, but split at its lower part into several lobes, the largest and longest of which extended down to the upper orifice of the stomach.

* Morbid Anatomy.

† Morbid Anatomy of the Gullet, &c.

31. An instance in which several hard tumors, the size of large hazle-nuts, formed in the cavity, near the middle of the canal of the Œsophagus, is brought forward, from Dr. MONRO's Museum, by Dr. BAILLIE. In this case, the obstruction to swallowing arose from a very uncommon disease. At the lower part, the coats of the Œsophagus were somewhat projected outwards by the growth of the tumors; within this part, the sides of the canal were in some degree thickened, and the inner membrane, to the extent of a sixpence, below the tumors, ulcerated.

32. A tendency to weakness and relaxation of the inner membrane of the pharynx or Œsophagus, has sometimes been the means of inducing a progressive and peculiar change in the condition of the canal; ending in fatal obstruction of the passage, by the formation of a pouch. In the third fasciculus of Dr. BAILLIE's engravings, is a very singular specimen of this disease; it is a sacculus, formed in the pharynx, by a cherry stone having rested there for three days, and formed a little recess for itself. This recess was gradually enlarged during five years, by a part of the food constantly passing into it, and for some time remaining in it, till it arrived at a considerable size. The food at last was all detained in this pouch or bag, and none of it passed into the Œsophagus. In Mr. WATSON's MSS., where this case is noticed, the following interesting particulars are added.—The patient, a distiller at Bristol, is said, after retaining the cherry stone three days, to have hawked it up again, though, after spitting it up, he at first thought he still felt it there; he then concluded it had passed down, but felt his throat sore (as he supposed) from its having passed. As this soreness diminished, however, the difficulty in swallowing increased; bougies and sounds were, in vain, attempted to be passed; and as for the last thirteen

days whatever he took was returned, he was for that period supported by glysters.*

33. The few circumstances just noticed might enable any person, with common attention, to determine, under a similar accident, the probability of a similar result. The lodgment of a cherry stone, or other small substance; the sense of soreness in the part, succeeded by a perceptible difficulty in swallowing, would sufficiently establish the nature of the danger to be apprehended; and surely, in its incipient stage, some attempts, at least, might be made to change the condition of the membrane; and by this means prevent the formation of a disease which, if once established, must end fatally (95).

34. The whole line of the œsophagus, possessing in common with the stomach and bowels a muscular structure, is also, in common with the other portions of the alimentary canal, subject to temporary obstruction from spasm. Any part of the œsophagus may become the seat of this affection, but it most commonly occurs at or near its superior extremity.

35. Hysterical females are particularly subject to spasmodic constrictions in the œsophagus, generally most troublesome when the stomach is most distressed by flatulence; and while the stomach is struggling for relief by the expulsion of its elastic contents, some part of that canal, rendered more irritable by its sympathy with the stomach, is seized with powerful spasm. The lower parts of the œsophagus, thus violently oppressed by flatulent distension, give the patient the impression, usually compared to that of a large ball moving up and down, threatening suffocation. Under these circumstances, should the patient's health and strength have been previously reduced, we know, upon the

* A more full account of this case may be found in the Medical Observations, vol. iii.

authority of Dr. HOOPER, that the complaint, from the extreme exhaustion consequent to its continuance, may terminate fatally; although such an event is extremely rare.

36. Some time since, I had an opportunity of witnessing a most unusual degree of this kind of difficulty and distress, in a thin, middle-aged woman. Somewhat exhausted by walking, when I saw her, a severe paroxysm of aggravated distress came on. The extreme distension of stomach, raising the whole abdomen, almost prevented her drawing any air into the lungs. The rapidity with which the gas was formed almost exceeds credibility. The air, escaping from the stomach, was generally expelled in a forcible loud rush, which continued for the space of half a minute, liberating, perhaps, a volume equal to several pints. She was then able to breathe again, till in a minute, or a minute and a half, the same imperious necessity for breaking off more wind returned as before. During the paroxysm, the quantity of air evolved, judging from the successive volumes set at liberty, must have been immense; as, for near an hour, the average that rushed up from the stomach was, I conceive, at least equal to a pint every two minutes. As long, however, as the cesophagus remained passive, the distress was comparatively small; but now and then the canal was closed by spasm, preventing the escape of the flatus collected below, and thus occasioning a struggle, severe beyond description, attended with all the convulsive appearances of actual suffocation for the space of nearly half a minute; and, even when relieved by the spasm giving way, being instantly succeeded by a long and continued rush of air from the stomach, the relief to the breathing was scarcely perceptible.

37. It has been remarked by Dr. MONRO, that some young women, in whom there is no globus hystericus, are subject to this kind of spasmodic contraction, when exposed to a stream of cold air;

and he adds, that he has seen spasmodic stricture of the gullet come on during a thunder-storm. The same gentleman observes, that he was acquainted with an elderly person, who was twice in the course of his life seized by a spasm in his gullet, during dinner; and, upon both occasions lost the power of swallowing suddenly, and when he seemed in good health. The first attack lasted a few hours, and was removed by an anodyne glyster; the second was of several days' continuance.

38. Occasionally a distressing affection of œsophagus, combined with temporary spasm and obstruction about the larynx, manifests, after a time, an inflammatory tendency; of which modification of spasm I have mentioned an example (Case 6.).

39. An interesting case of spasmodic stricture from gout, is mentioned by Mr. WATSON. An elderly lady had long a difficulty in swallowing solids, yet at times she swallowed pretty well, particularly a little before she died. She took down so little nourishment, that every one was amazed she lived so long as she did. The difficulty in swallowing was thought to be owing to spasm of the œsophagus, which came on at uncertain times, from a translation of gouty action to this part. She died greatly emaciated. The medicines taken were not known. On opening the body, the left lung was extensively adherent, and in each cavity of the chest were several pints of serum. The œsophagus was externally inflamed, and on its internal surface gangrenous. The stomach exceedingly thin, and much inflated, was internally inclined to gangrene. The abdominal aorta, and iliac arteries, were extensively ossified.

40. Where disposition to spasm in the œsophagus is permanent, whether owing to the influence of some remote irritation, or disease in the part itself, the effect will be spasmodic stricture.

41. In these cases, it sometimes happens, that however absolute the difficulty either in swal-

lowing, or in passing instruments, may have been during life, the seat of obstruction has after death been found perfectly relaxed and apparently healthy. Such a case is particularly mentioned by Mr. GOOCH, who in the examination of a diseased œsophagus, which, by the difficulty in swallowing at length destroyed the patient, some time after she had been cured of inflammatory sore throat, expressed his surprise that after the most careful and accurate inspection, no evident cause for the fatal obstruction was discovered. He concludes, "we then went to speculation, which indeed affords but a faint light in discovering the causes of diseases, and supposed the parts must have been so irritable, as to be thrown into spasmodic contraction, whenever she attempted to take any kind of food."*

42. Any disturbed or diseased condition of stomach, may occasionally excite spasmodic contraction in the œsophagus. A man, mentioned by Dr. MONRO, was under treatment six months, by the bougie, for a stricture about the middle of the œsophagus; when the previous uneasy sensations felt in the stomach were attended with the frequent rejection of a dark mucous fluid, flatulent acidity, and total loss of appetite. Continuing to decline, he in two months died; and on examination, the stomach, greatly distended, was found firmly adherent to the corresponding surface of the right lobe of the liver. The stomach, filled with the same dark-coloured fluid, rejected by vomiting, and its internal surface, over which the liver adhered, was for a handbreadth in a state of fungous ulceration; but the œsophagus was entirely free from the least appearance of contraction, or disease.

43. Upon one occasion, where the stomach was the seat of the primary disease, a lady complained

* Cases and Remarks in Surgery.

of difficulty in swallowing, for which I was desired to see her; and on passing an œsophagus-sound three-eighths of an inch in diameter, I found a spasmodic stricture. This once passed, the instrument moved freely down. A bougie passed several times, removed the obstruction, enabled her again to take food with comfort, and I consequently took my leave. The original complaint, in the mean time, continuing to make progress, at length proved fatal; upon which event, the surgeon in attendance obtained leave to ascertain the appearances after death, and favoured me with a statement of them (Case 8.).

44. In another instance of a similar complaint, where the lungs had for some time been diseased, difficulty in swallowing from spasmodic contraction led to my visiting a lady, for whom one application of the bougie perfectly and permanently relieved the stricture (Case 7.).

45. Where a part of the canal of the œsophagus has continued very long under the influence of spasm, the affection frequently, though slowly, assumes new characters; the contracted part never perfectly relaxed, and by degrees less and less subject to vary in the degree of contraction, eventually becomes a permanent stricture. Should, however, the stricture have been originally spasmodic, without the healthy organization having subsequently undergone material change from inflammation, the complaint may still be presumed to stand singly; and if within the reach of instruments, may be considered to be favourably circumstanced for relief, from the hand of the surgeon (Case 9.).

46. Permanent stricture may take its rise precisely in the same manner, and from the same cause, that sometimes induces another disease, already referred to (Case 5.) frequently originating in a severe attack of common sore throat; subsiding into permanent difficulty of swallowing, in

some one part of the canal. Dr. MONRO mentions a patient for three years unable to take adequate nourishment, where the complaint arose from this cause, in whom ulceration came on above the stricture, eventually perforating the trachea (49.).

47. Where permanent stricture proves obstinate, resisting the means used for its relief, the disease, unfortunately, seldom remains stationary, much more frequently going on to increase, either in degree, or extent. In some instances ulceration takes place below the stricture, but more commonly above it, when the expectorated matter will often have the appearance of purulent fluid, mingled with mucus. In other cases the continued efforts to swallow, and temporary lodgment of food above the contracted part, produces an enlargement, or sacculated state of the canal, just above the stricture; which sacculus was in one case found by Dr. MELVILLE sufficiently large to contain a pint of fluid.

48. Should ulceration actually exist, it will in general require a modification in the treatment. Of this event, however, it must always be extremely difficult to estimate the importance. An ulcer upon a comparatively healthy surface, shall secrete pus freely for a time, and then heal up, provided the disposition of the surrounding parts is healthy. The importance of an ulcerated surface will greatly depend on its situation, as well as extent, neither of which points can be correctly understood during life; and lastly, its importance will be influenced by its being an indication of primary or secondary disease, a distinction not always to be determined with certainty, during life.—Upon all these accounts, our decisions, like those of the law, should give the unfortunate sufferer the full benefit of every doubt. It betrays, in my opinion, a most unpardonable want of feeling, to decide hastily and unfavourably upon circumstances, the absolute ex-

istence of which we cannot prove, though we may reasonably suspect. Indeed, questions that admit of more clear determination, should always be decided cautiously. It is not two years since an elderly gentleman came up to London for the advice of a surgeon of the first eminence, who, upon hearing his symptoms, told him abruptly (without examination), that he had a stone in his bladder. The gentleman was so shocked by this intelligence, that he was with difficulty conveyed home, was the same afternoon visited with paralysis, and in a few days died; and upon the friends desiring to have the body opened, there was no stone, and the only complaint under which he had laboured, was found to be enlargement of the prostate gland.

49. The œsophagus is not only subject to spasm (34.), but to disease also, by the extension of morbid action from neighbouring parts. Dr. HAY* has related an interesting case of a gentleman, who with dyspepsia and costiveness had a sense of obstruction in swallowing, referred to flatulence, soon succeeded by pain in the right breast. With occasional sickness he brought up ropy mucus. Bleeding, blistering, and purging, failed to prevent the addition of cough and fever to the previous pain and other symptoms. The complaint at last, induced complete obstruction of the œsophagus. An elastic catheter was therefore passed into the stomach, but every thing introduced by this means was instantly rejected with convulsive coughing. He now began to expectorate purulent matter; and after eight months' illness, died. A large abscess, in the upper and posterior part of the right lung comprehended the œsophagus and trachea. The œsophagus was destroyed by ulceration, for half its circumference, and four

* Medico-Chirurgical Transactions of Edinburgh, vol. i.

inches in length; where the ulceration had also made an opening into the trachea.

50. In one instance of extensive affection of the œsophagus, the disease appeared to have extended from that canal to the lungs. Through the kindness of my friend Mr. SPILSBURY of Walsall, I possess some particulars of the case, illustrated by two valuable sketches in oil. The disease was of an unusual kind, being a specimen of fungus hæmatodes; or soft cancer. The coats of the œsophagus were considerably thickened, exhibiting a congeries of soft tumors, upon the internal surface ulcerated, and fungoid. This disease occupied the upper part of the canal for the extent of six or seven inches. A fistula opening from the midst of the ulceration to the adherent lungs, and communicating thence to the bronchia. Protruding up into the pharynx from the œsophagus, was a red fungous tumor, filling up the opening, and marking the commencement of disease. Though this disease was extensive, the patient continued to travel as a mail-guard, till about six months before his death; three months of the time under a course of alterative mercurial medicines. The armed bougie, repeatedly employed, never failed to relieve the difficulty in swallowing; allaying irritability and distress so effectually, that even within the last month he took solids, cut small.

51. Fungus hæmatodes, is a disease which, like true schirrus, originates I believe, in the cellular tissue; and as cellular membrane is the connecting medium between the fibres of every muscular and other texture, so has soft cancer been occasionally found to occupy most of the structures in the body. In the alimentary canal it is very rare; I have never met with it myself in the œsophagus and the case just mentioned (50.) is the only one with which I am acquainted. In the rectum I have seen but one instance of this disease, the early history of which is already published, as a case of

stricture in the bowels.* On examination after death, the appearances and structure of the disease were found precisely similar to those specimens of fungus hæmatodes hitherto ascertained, in the other viscera of the body.†

52. The œsophagus is occasionally subject to schirrus, or true cancer. Most of the affections already noticed may be induced as the accidental consequences either of relaxation, irritation, spasm, or inflammation. Cancerous disease, on the other hand, appears to arise from a general or constitutional disposition; the effects of which take place, independent of external agency; and too frequently continue to extend their ravages, in some cases without admitting the least control either from medicine, or surgery.

53. All parts of the œsophagus are liable to this disease; and, generally speaking, difficulty in swallowing, as in the early stages of other kinds of stricture, is here also among the earliest symptoms.

54. Most commonly, schirrus may be distinguished by its symptoms, from any other affection. Where the constriction is situated at the upper extremity of the œsophagus, Mr. HEAVISIDE considers a very bad symptom to be a complaint of occasional pain extending from the stricture towards the ears; as such pains invariably mark a cancerous tendency in the disease. Frequent pains extending laterally to the shoulders, where the seat of the disease is lower down in the œsophagus, must be considered as of a similar character with those shooting upwards towards the ears, and therefore highly unfavourable. But, of all diagnostic symptoms, sensations of shooting, heat, and

* Practical Observations on the Diseases of the Lower Bowels, &c. 3d Edit. (Case 25.)

† In the valuable treatise on Fungus Hæmatodes, by Mr. WARDROP, that disease is not stated to have been seen in any part of the alimentary canal.

burning in the part itself, more especially if the patient emaciates rapidly, seems to afford the most decisive evidence of the existence of schirrus, or cancer. Although, however, this sense of heat, if present, may clear up doubt, its absence must not remove suspicion; for of the two cases of this disease selected from those I have seen, in one there was a constant sense of intense burning heat in the part, compared to that of a red-hot poker boring through the back (Case 11.); in the other no feeling whatever, from first to last, of local pain was perceived, much less of those peculiar sensations generally attendant upon this disease; although after death, it was found to possess every appearance of tuberculated schirrus (Case 10.).

55. The peculiar characters that distinguish schirrus, are very rarely developed in early life; but sometimes they do occur; as the following outline of a case published by Mr. KITSON evinces.* A young woman, in May, felt a soreness and prickling sensation in the throat, increased by pressure, and soon after a difficulty in swallowing fluids, even by teaspoonfuls, soft bits of fat meat passing down most easily. The contraction of the œsophagus was so close, that in the course of a month a bougie the size of a goose quill would not pass. Various means failed to arrest the progress of the disease. In October she had become emaciated, had more difficulty in swallowing, and had become hoarse, with oppressed breathing, and some tumor of the thyroid gland. For three months she took nothing but bread soaked in milk or tea, a little fat bacon, or an egg beat up with sugar and milk. She kept on her feet almost to the last, and died from exhaustion, rather than pain, in October. — On examination, the thyroid gland was enlarged. The whole circumference of the inferior part of the pharynx, and superior part of the œsophagus,

* Edinburgh Medical and Surgical Journal, vol. iii.

were indurated, and ulcerated; so as to expose the posterior part of the larynx. The ulceration to the left, extended from the superior corner of the thyroid cartilage, two inches downwards; to the right, the ulcer was of less extent. There was no opening, however, into the larynx, or trachea. The glottis was swollen, almost closed, and obstructed by a gelatinous substance. The epiglottis thickened, and inflamed. The inferior parts of the œsophagus and trachea were perfectly sound.

56. Among Dr. BAILLIE's valuable engravings, is a stricture near the cardia, the sides of the œsophagus being very thick and hard, with some degree of ulceration upon the internal surface. The stricture would allow a goose-quill to pass; and was about an inch and a half in extent. Another example in the same work represents a stricture in the œsophagus, of great extent, or rather a uniform contraction of nearly the whole canal. The disease is of schirrous hardness, and on the cut surface are seen the characteristic white transverse lines, exhibiting the cellular membrane interposed between the muscular fibres, thickened from disease. This disease, unattended with ulceration, had rendered the sides of the œsophagus a quarter of an inch thick, and was regarded by Dr. BAILLIE as affording a good example of schirrus in muscular parts.

57. An instance of stricture, very similar to the above, is mentioned by SAMPSONIUS; it is the case of a woman long afflicted with difficulty in swallowing, for whom he frequently endeavoured to pass instruments, without success, as he found an obstruction no instrument appeared likely to surmount. On opening the body of the patient, who lived only a few months, the canal of the œsophagus, from the top of the sternum down to the stomach, was so contracted as scarcely to admit a hog's bristle, and so compact and indurated as to resemble cartilage.*

* Miscellan. Curios. Ann. 1613.

58. Schirrous disease, entirely confined to the cardiac orifice of the stomach, I believe to be extremely rare. I have, however, in one instance, had an opportunity of examining the body, in such a case. The patient, I was informed, had during life suffered from a progressively increasing want of power of swallowing, or rather of keeping down solid food ; which passed at first very well, but after a short time was regurgitated. Instruments passed as low as the cardia, but there stopped. Neither solids nor fluids could at last be made to reach the stomach : and the patient soon died. On my being requested to open the body, the only appearance of disease was a tumor, as large as a small orange, at the cardia. On dividing this tumor, so as to expose the passage of the œsophagus, it appeared that the disease was situated in the muscular coat ; for the internal membrane, somewhat inflamed, was otherwise unaltered. The feel of the disease was that of schirrus. It was externally firm, including several tumors projecting inwards ; so closely compressed against each other, as to close up the passage into the stomach.*

* The history of this case is related in my *Practical Observations in Surgery and Morbid Anatomy*.

Although it is not the object of the present essay to include malformations of parts, it may not be uninteresting, while considering the symptoms attending complete obstruction from disease, to notice an instance of the same difficulty from malconformation of the parts at birth, as I do not know of any similar observation. In *October* 1822, my friend Mr. BARROW was kind enough to bring me the imperforate œsophagus from an infant, born otherwise healthy, who sucked and fed well, but seemed with sickness to return every thing, and could swallow nothing ; it died at three days old. He examined, and found the pharynx and upper inch of the œsophagus perfect, where it terminated in a cul-de-sac, and was discontinuous with the cardiac portion of the stomach, where the closed orifice formed a small button. The stomach contained a glairy mucus, and the bowels meconium, as usual.

During life Mr B. passed a bougie down the œsophagus, and found the existing obstruction, which it does him credit not to have attempted to pass.

The preparation is in Mr. HEAVISIDE'S Museum.

ON THE TREATMENT.

59. Among the affections of the fauces relaxation of the uvula (2.) is a complaint that rarely becomes important; although, whenever it appears, on inquiry, to be concerned in producing symptoms of dyspepsia, it should never be neglected. Provided the complaint gives little annoyance, or is trifling in degree, astringent gargles, infusion of roses, decoction of bark, with alum or port wine, will frequently answer the purpose, and remove the disorder. If these fail, equal parts of white sugar and alum, rubbed into a fine powder, may be occasionally applied, by a tea-spoon passed into the mouth, allowing the uvula to drop into it.

60. Should local applications not succeed, tonic medicines may sometimes be directed internally with advantage. Where, however, irritation from this cause has produced serious inconvenience, circumstances may forbid the use of tonic remedies; when this is the case, and the complaint cannot be otherwise got rid of, it may be necessary to recommend its removal.

61. The uvula may be very readily removed, by excision. Most commonly this has been done with scissors, or by means of a thin plate of silver, with a hole through which the uvula is allowed to fall, when a concealed blade, traversing the plate, cuts it off. By these modes of operating, however, the part is of necessity liable to bleed freely; and as the soft palate is extremely vascular, and the parts in every instance extremely relaxed, it has now and then happened, that a fatal hæmorrhage has been the result of this apparently trifling operation. Upon this account, as well as for reasons explained elsewhere*, I conceive it far better to remove the

* Pract. Obs. on the Diseases of the Bowels, &c. Paragraphs 254 and 255.

part by including it in a ligature. I have, in several instances, applied a ligature with this view, and have never found it troublesome, from pain or otherwise ; neither can it fail perfectly to perform its duty.

62. The manner of operating I have adopted is, to form a noose, large enough to receive the uvula, in the middle of the ligature. The patient's tongue being kept down, one end of the ligature, passed through the little ring at the extremity of a small steel instrument, held in the left hand, may be conveyed to its place, the noose being placed horizontally, so as to let the uvula drop through it ; the other end of the ligature kept in the right hand, the noose may be tightened, at the instant the uvula is perceived to be exactly included. A second knot being tied, and the ends cut off, the operation is finished. A very trifling degree of inflammation follows, the uvula shrinks, the ligature and part destroyed drop off together, and the part is commonly healed within a week.

63. Inflammation of the tonsils (7.) is observed by Dr. HOOPER rarely to require very active treatment. Should the inflammation run high, in a tolerably strong and plethoric adult, a moderate quantity of blood may be drawn from the arm, or jugular vein, but still more frequently by means of leeches. Occasionally much relief may be afforded by the scarification of the tonsils. An emetic will often prove beneficial, and sometimes will appear to check the progress of the complaint. To these means must be added cathartics, diaphoretics, and the general antiphlogistic regimen. A blister, or in milder cases the volatile liniment, applied on a slip of flannel to the throat, will assist in producing a sufficient determination from the part affected. The use of proper gargles will conduce much to the comfort of the patient, and cure of his complaint. If there is much tension and pain in the fauces, a solution of nitrate of potash will be best ;

otherwise dilute acids, a weak solution of alum, &c.

64. When, from the degree and appearance of the swelling in the tonsils, there is reason to believe suppuration has taken place, the matter should be discharged, by a sufficiently free opening. The progress of the affection, however, should be attentively watched, that the most suitable time for making this opening may be determined. If the puncture is premature, the result will be unsatisfactory, the full establishment of suppuration being impeded, though not prevented; if deferred too long, the patient may be distressed, or thrown into unnecessary alarm, by the consequences of excessive enlargement in the tumor.

65. The contents of the abscess may very conveniently be let out by the point of an abscess lancet, the blade of which turns rather stiff in the scales, the shoulders of the instrument being covered by a slip of lint wrapped round, to prevent any risk of wounding the tongue. A very neat instrument is sometimes used for this operation, particularly, I believe, in France; formed of a long narrow sheath, with a concealed point, which by pressure on the handle passes forward the blade of a lancet, by which the tumor being opened, and the pressure removed from the handle, the blade instantly retires into its sheath again. This contrivance, however, provided the surgeon has a steady hand, and the patient has made up his mind, is unnecessary; the common lancet answering the same purpose, with greater facility.

66. Where inflammation of the tonsils is attended with much fever, the symptoms will occasionally increase to so alarming an extent, as to render it necessary to obtain relief, independent of any prospect of suppuration; here I have repeatedly found the advantage of deep and free scarification, as a means of diminishing tumor, and relieving distress. Under these circumstances, Mr. WARNER

also says, he found the greatest advantage from deep scarifications ; giving almost immediate relief, either by evacuating deep seated matter, or if no matter exists, by the discharge lessening tension and tumor, and releasing the patient from the perpetual dread of suffocation. Mr. WARNER adds, that where a patient had been subject to attacks of this kind twice in the year, he had known this operation prevent their return ever after, although the fever leading to them continued to return as before.

67. In weak and debilitated habits, the symptoms will differ considerably from those that take place in a healthy state of constitution ; as already pointed out (11.) When the strength of pulse fails, the furred tongue becomes darker, the throat manifesting a tendency to ulcerate, the treatment must be adapted to the particular circumstances of the case. Where the typhoid character is strongly marked, with ulcers in the throat, verging perhaps to gangrene, Dr. HOOPER urges the necessity of supporting the system by a nutritious diet, with a moderate quantity of wine, and tonic or stimulant medicines, as the cinchona, columba, ammonia, capsicum, &c. ; the acids will also be very proper from their antiseptic, as well as tonic power ; and stimulant antiseptic gargles should be frequently employed, as the mineral acids sufficiently diluted, with the addition of tincture of myrrh ; or these mixed with decoction of bark, &c.*

68. The instance brought forward (12.), from the manuscript notes of the late Mr. WATSON, of inflammation, very unusual in violence and extent, running on to mortification of the œsophagus, stomach, and bowels, should inculcate the necessity of strict and anxious attention to the hourly progress of cases ; for it is sometimes impossible, even by these means, to learn the peculiar tendency, or idiosyncrasy of constitution, until, too late, it is unveiled by fatal experience.

* Medical Dictionary.

69. Should chronic enlargement of the tonsils take place under the circumstances noticed (13.), and this enlargement become so considerable as to create alarm, the only means of effectual relief, is the removal of the tumor by an operation; and provided the relative figure, and other circumstances in such tumors, were in every instance the same, the best mode of operating would be easily determined.

70. Tumors in this situation, are removed either by ligature, or by the knife; of these two methods, the first, where practicable, should, in my opinion, always have the preference. In some instances the basis has proved the broadest part of the tumor; but this I believe rarely occurs to that extent, as to prevent the possibility of settling a ligature round it. Much will frequently depend on the time of operating. In one stage of its growth the size of the tumor may admit of being removed conveniently by the ligature, while in its subsequent periods of increase, its magnitude may entirely prevent the possibility of a ligature being applied.

71. Where the basis of a tumor of this description may be the broadest part of the swelling, a ligature carefully applied, and very steadily and gradually tightened, will progressively form a depressed line for itself, by removing the œdematous fulness, round the margin of connection between the basis of the tumor and the surrounding parts; and as the constriction of the ligature is increased, the volume of the tumor is pretty sure of retiring before it, and the operation is then finished without difficulty.

72. By the methods formerly in use, the ligature was usually applied by means of a double canula of metal, which upon tightening the ligature was of necessity retained in its place, till the tumor separated. This method, however, was much more disagreeable, as well as inconvenient, than the mode now generally adopted, in leaving the liga-

ture to itself. In one instance I removed by operation a very enlarged tonsil, by simply passing a ligature round its basis. The ligature used was a small whip-cord. A single knot first made on one end of the cord, the end so knotted was brought forward upon the other, and a single noose upon itself, including the other, was thus made, and drawn upon it close to the first knot. The running knot was then passed along the ligature, so far as to leave a circular noose rather larger than the circumference of the tonsil to be included. The patient seated in a proper light, the head held steady, and the tongue depressed, I carried the noose of the ligature, in my left hand, through the mouth nearly to its place, and settled it accurately round the basis of the tumor by the assistance of a proper instrument. Then, an iron instrument with a small ring at its end, adapted to push along the running knot, was passed along the ligature, to the point where it reached the basis of the tumor. The instrument now held steady, its handle being the fulcrum, the ligature was very cautiously and firmly drawn outwards, so as by slow degrees to push the knot closer and closer without disturbing the position of the noose, till no more could be gained; the tightening the ligature occupied near five minutes. The instrument removed, the end of the ligature was attached to the angle of the mouth by sticking-plaster, and the operation was finished. Some additional particulars may be found by reference to the case (Case 2.).

78. The above operation in some respects resembles that described as an improved operation by the late Mr. CHEVALIER*, who first perforated the basis of the tumor, then passed a double ligature through, and tied one round each side of the tumor, and lastly, tightened each of the ligatures daily, till the part dropped off. I think

* Med. Chir. Trans, vol. iii.

the course which I adopted was the more simple and ready method; and certainly had every requisite for perfect success, judging by the event.

74. Occasionally, however, it has happened, that the application of a ligature has been impracticable. Mr. WARNER once saw a tonsil so excessively enlarged, as nearly to occupy the whole roof of the mouth. It followed cold and fever, and soon rendered the patient incapable of swallowing any solid food, or speaking to be understood. There was also severe pain in the right ear, and deafness. The tumor, on looking into the mouth, was enormous, the shape of an egg, with its basis towards the œsophagus. It extended forward very nearly to the incisor teeth, was in contact with all the molar teeth on the right side, and firmly adherent to nearly the whole roof of the mouth. Into the pharynx, the finger could not reach far enough to determine its limits. The internal membranous covering was smooth. This tumor, by means of a scalpel, with a blade somewhat curved, was in principal part removed by excision, when the bleeding was checked by washing with cold vinegar and water; the remaining part of the tumor, brought forward by a hook, was then removed by the same knife, and the same means as before again restrained the hæmorrhage. Several pieces of slough formed and separated in the first week. Before the operation it could not be determined whence the tumor arose; afterwards it appeared to be only the right tonsil. Its substance was solid, but its internal part more spongy than usual.*

75. M. DESAULT was latterly much in the habit of removing enlarged tonsils, by means of an instrument with a concealed blade; it appears to be, however, ill adapted to its task, except the instrument were purposely constructed, for each particular case, and so made as to exactly fit the figure

* Cases in Surgery.

and size of the tumor. A probe-pointed scalpel, assisted by the hook, seems to me the most ready and convenient mode of excision. In every case great care must be taken that no partially separated portion gets into the larynx, as the patient may thus be suffocated.

76. Tumors, that appear to have originated in the cellular membrane, about or behind the pharynx, especially when their precise limits cannot be satisfactorily determined, should always be regarded with the eye of suspicion, as objects for operative surgery, as is particularly proved in one instance (14.), where it was quite impossible, by the symptoms, to know or even reasonably to suspect, to how great an extent the disease was proceeding; till all doubt was removed, by the eventual death of the patient, and the examination of the body. Such examples as these should determine us to add to our industry zeal, to our zeal prudence, and to prudence diligent reflection, in the practice of our most important, and most useful profession.

77. The symptoms that occasionally attend disturbance in the alimentary canal, during the progress of eruptive fever (15.), are generally such as indicate extreme irritation, although sometimes we have positive proofs they may run on to inflammation. The recollection of these circumstances will assist the medical practitioner in balancing between the propriety of relying upon a soothing anodyne plan, the necessity for adopting the more active measures of depletion, or the expediency of keeping both these principles of treatment in view, by the preference of a modified line. These considerations, however, more immediately interest the physician.

78. It has been observed (17.) that inflammation from long neglect, or unusual severity, may proceed on to suppuration, inducing either ulceration or abscess; and when the distressing progress and

serious event of some, even of the few cases brought forward in this essay, are regarded with attention, it must be superfluous to dwell upon the importance of prompt and proper treatment in every, even the slightest, attack of inflammation in these parts ; where, upon the occurrence of abscess, ulceration, or other ill consequence, we have so little within our reach.

79. When abscess is about to take place in or near the fauces or œsophagus, the probability of such an event must excite redoubled exertion to moderate the increased action by active depletion, and the other proper means (63.). Much will depend on the extent of the abscess, and the manner and direction in which it breaks. It most commonly happens, that if there is any facility for such a course, the matter of an abscess makes its way to some external outlet, which in the present case would be the fauces, or œsophagus. The constitution may, however, under circumstances of deficient support, from poor living, be unable to assist itself even in youth ; and in this way a large abscess, situated directly behind the inner membrane of the pharynx, may proceed rapidly forward to a fatal event (Case 4.).

80. Occasionally, a very large collection of matter has formed, made its escape by the œsophagus, and the patient has recovered perfectly. Such a case occurred in a girl, aged 17 years, who had been two months afflicted with difficulty in swallowing, from some complaint in the throat, just below the top of the sternum. Every attempt to swallow even a little water during that period had induced violent convulsions and insensibility ; after which, coming to herself, she complained of intolerable pain in the breast, with an inexpressible sense of weight, or anxiety. No external heat or tumor could be perceived. On enquiry, it appeared, that previous to her present complaints she had a violent quinsey, with high fever, threatening suf-

focation ; when, the swelling about the throat suddenly disappearing, she became sensible of a painful weight within the chest, at the point where it still remained. This complaint, considered to be the consequence of a translation of inflammation from the fauces to the throat, it was expected would form abscess, and the parts were accordingly fomented. In three days the tumor broke into the œsophagus, and the poor girl was nearly suffocated with the stench and quantity of the purulent matter. Kept for a time on light fluid nutriment, the discharge improved, the abscess contracted, healed up, and the patient recovered.*

81. The distressing train of symptoms induced by ulceration of the mucous membrane lining the fauces and throat, is sometimes beyond description terrible, even where after death the extent of the ulcerated surface has been found to be comparatively trifling. Much, however, under these circumstances, may often be done by careful attention to the treatment. I have in several instances had patients who recovered, where, although the seat of the affection could not be brought before the eye, there was every reason to conclude ulceration had existed.

82. One of the frequently distressing consequences of ulceration in or near the œsophagus, is difficulty in swallowing, from spasmodic stricture (34.); where this is the case, the fact may be easily ascertained by passing an œsophagus-sound, which, in an intelligent hand, will at once determine its seat, extent, and degree :—its seat by the point at which the instrument meets obstruction ; its extent by the continued difficulty, or quickly recovered freedom, in moving through the canal ; its degree by the diameter of the ball, and the facility with which it slips through.

83. Should spasm be found to exist, it may in

* Edinb. Med. Essays, vol. iii.

general be sufficiently relieved by the introduction of a curved elastic gum bougie, its diameter being regulated by the previously ascertained degree of contraction in the stricture, so applied as to produce moderate dilatation. This operation may be two or three times repeated, with the interval of a few days; the bougie being kept in the stricture about four or five minutes at each application.

84. Where the difficulty in swallowing arises from the insupportable distress occasioned by irritation from the food passing over the ulcerated surface (20.), the evil, although most serious, is unhappily but little under control. The relief afforded by anodyne and antispasmodic medicine, is sometimes scarcely perceptible, and the application of blisters and other means of exciting counter-irritation, only ends in disappointed hope; and most frequently we are under the painful necessity of at last resting satisfied with the administration of medicines, that may render the system less acutely sensible to the perpetual recurrence of shocks which no human firmness could otherwise endure.

85. The ease and certainty with which inflammation within the chest may commonly be relieved, by proper care, and timely attention, renders such terrible events as that noted by Mr. WATSON (21.) extremely rare; in fact, they would scarcely ever occur but for the neglect of the patient himself, in not having desired assistance in the commencement of the complaint.

86. Where palsy of the œsophagus, in early life, induces difficulty in swallowing, it has been stated (23.) to be generally the result of violent fever, especially affecting the alimentary canal. An instance is mentioned by Dr. MONRO, in which this kind of paralysis was consequent to yellow fever; a complaint that constantly induces extreme debility of the stomach, as will be more particularly

noticed in a subsequent part of these observations (271.).

87. Paralytic affections of the *œsophagus*, when clearly ascertained, are often most effectually relieved by electricity. By this treatment, a patient of Dr. MONRO's was perfectly recovered, who for some time could swallow only while on the insulated stool of the electrical apparatus. Should this remedy, however, not succeed, or should its application prove objectionable, which may happen when the functions of the nervous system have been seriously disturbed by apoplexy or paralysis, stimulating medicines, with the volatile alkali, may be found useful.

88. In several instances, where the secretions from the kidneys and bladder were morbidly affected by paralytic complaints, I have, however, gained more ground by endeavouring to relieve the functions of the brain, by leeching and blistering the head, than by attempting to restore nervous power by the use of stimulating medicines; and on the same principle, should other plans fail, I should be much disposed to try the effect of depletion, as a means of restoring the impaired functions of the brain and nerves to their healthy condition.

89. Of sudden death from the imperfect act of swallowing, two instances have been mentioned (27.); and my friend, Mr. GILL, of Liverpool, late surgeon to the 13th Foot, was sent for to an old woman who in an irritable fit of impatience swallowed, unmasticated, a large piece of beef. She was dead when he arrived. He could not reach the cause with his finger, but passed the probang, and in withdrawing it extricated the fatal morsel, which he conceived had been partly in the *œsophagus*, and partly over the *rima glottidis*. Resuscitative means were tried; but in vain.

90. Sudden death has sometimes been produced by the detention of a quantity of solid food, not over, or within, the opening of the larynx, but in the *œsophagus*, opposite some part of the course of

the trachea ; the obstruction being caused by the natural power of contraction in the œsophagus not being sufficient to enable it to pass down its contents ; the immediate consequence of which is, that the distended œsophagus, forming a tumor forward, presses the yielding and elastic tube of the trachea most commonly against the upper edge of the sternum, and if this pressure be sufficiently absolute, the patient is suffocated. A case of this kind, in which, from being fortunately upon the spot, I was enabled to save the patient's life, by pushing the meat forcibly down, is related in a work replete with valuable information.*

91. It was not my intention to include, in the present remarks, the consideration of obstructions from extraneous bodies lodged in the œsophagus ; the subject is extensive, and in one view distinct from that of the diseases of the canal. As, however, my great object is practical usefulness, I may perhaps be excused in observing that M. HEVINT, in a valuable memoir, mentions a hook readily formed by doubling the end of a piece of light iron wire, by which M. PERROTIN in various instances succeeded in bringing out of the throat bones of fish, or animals ; which had been entangled in the throat. The same simple and therefore valuable contrivance, may, as it appears to me, be usefully applied, where a coin, accidentally swallowed, has been detained in the œsophagus. It has frequently happened that a piece of money has passed not only the œsophagus, but the whole extent of the intestines. There are, however, some instances to the contrary, of which one has been adduced by Dr. BAILLIE, in his illustrations of Morbid Anatomy ; and another has been recently communicated to me, by Mr. GILL ; who says, " When I was in Canada, the surgeon of the 16th Foot swallowed a

* Dublin Hospital Reports, vol. iii.

† Memoirs of the Royal Academy of Surgery, of Paris.

coin—it lodged in the œsophagus, I believe, as I understood it could be felt from the exterior of the throat. Strange to say, he remained without any attempt being made at extraction. A week or ten days afterward, having dined at the mess, a violent hæmorrhage occurred, and he died in the course of the night.”

92. In that particular kind of obstruction described by Dr. ROBERTSON (29.), as connected with ossification of the cartilages of the larynx, the first object must be to determine its cause. The existence of ossification in these parts, Dr. BAILLIE observes, may in general be ascertained by a careful external examination; and as to the obstruction being of a spasmodic or paralytic nature, that can be readily learned by the introduction of the œsophagus-sound; and this question determined, the treatment must be regulated accordingly.

93. When there is reason to believe obstruction of the œsophagus arises from polypus in the canal (30.), the throat should be subjected to as perfect an examination as possible; and if the disease cannot by this means be seen, the exhibition of an emetic may, perhaps, during its operation, bring the disease for a short time into view. When, however, all doubt is cleared up, the aid of surgery affords but an indistinct prospect of essential benefit, except where from the origin of the disease being within reach, a ligature may perhaps be carried round the neck of the tumor, so as to destroy it.

94. Where the ligature is practicable, its application may be facilitated by various contrivances, according to the circumstances of the case, and the ingenuity of the surgeon. The end of the ligature may be first carried round the neck of the tumor, by any convenient means, and both the ends of the ligature then passed through a small ring at the end of a stout silver wire; the ring is to be pushed along the ligature up to the root of the tumor, the

ligature drawn sufficiently tight, and the ends twisted fast round a wing at the opposite end of the wire; the instrument thus situated must be allowed to remain, till the tumor drops off. Should it be impracticable to reach the origin of the disease, it may still, under some circumstances, be advisable to attempt a partial removal of it, as was effected in Dr. MONRO's patient; the propriety of such an operation, however, must rest with the judgment and good sense of the surgeon to determine.

95. Where, from the accidental and temporary detention of any small substance in the throat, there is from the circumstances noticed in a preceding paragraph (32.), reason to apprehend the formation of a pouch, in the pharynx or œsophagus, the first object must be to ascertain the precise seat and extent of the change. For this purpose an œsophagus-sound, with a ball of one-fourth of an inch in diameter, may be very lightly and gently passed into the throat. With a view to determine on which side of the canal the duplicature or little pouch exists, the passage must be examined in the same manner in which the urethra is directed to be sounded, for ascertaining the situation and direction of a false passage, in stricture.* The ball must first be made to glide lightly down in contact with the posterior surface of the canal; if this fails, the instrument is to be withdrawn, and passed down lightly in contact with the anterior side of the canal; and in the same manner the lateral surfaces are to be successively traversed, until the ball of the sound being in the same line with the pouch, is caught by the obstruction. The true nature of the obstruction may be in another way demonstrated, by introducing a large sized ball, which, if of the diameter of an inch, will, in the early stage of the complaint, pass down without perceiving any

* Pract. Treatise on the Diseases that affect the Secretion and Excretion of Urine. Longman, 1823.

difficulty at all ; while the smaller ball will be invariably stopped.

96. It is sufficiently clear, that, provided the patient has not in the first instance neglected his own case, the surgeon will, by the above examination, be enabled to ascertain that the recess or pouch is of small extent, as to breadth and depth ; and it may consequently be fairly concluded, that as yet the internal membrane only is concerned in its production. The situation of the pouch ascertained, its depth may be determined with sufficient accuracy, by first passing the instrument lightly to its bottom, then leaning the ball lightly over against the opposite side of the canal, and gently withdrawing it ; observing the distance passed before the ball springs from its confinement, or, in other words, before it slips over the edge of the pouch. By this means, unless the affection has been unguardedly allowed to take its own course for many months, the depth of the recess will most probably be found to be within half an inch.

97. Now, as the increase and eventually dreadful consequences of a pouch thus situated, are entirely owing to the lodgment of food within its cavity, it is evident that the only care required will be to render it in the early stage of its formation incapable of this office. If within reach, this might be effectually done by snipping it through the middle, to the bottom, with a pair of scissors ; and the same operation may with equal security and certainty be performed in the pharynx, or upper part of the œsophagus, by a well made instrument, properly constructed for its accomplishment.

98. The œsophagus-sound, of strong silver wire, adequately curved, and carrying a ball of a quarter of an inch diameter, may be adapted for this operation by the addition of a small probe-pointed blade about an inch in length, connected to the sound by a hinge, its probe-point shutting into a notch in the ball, and its smooth back forming an

even line, from the face of the ball backward to the wire of the sound. By the application of a small stiff spring to the blade, and the addition of a second moveable wire to the first, the wire may readily be made to raise the probe-point of the blade from the ball, about half an inch, and the spring to close it again, at pleasure. The instrument, however, should be so well constructed, that while the spring has sufficient power in closing the blade, to divide perfectly and promptly the interposed membranous fold, the movements of opening and closing the blade should take place with the greatest possible ease, and the least possible friction.

99. Suppose, then, the pouch or sacculus to have been discovered upon the posterior side of the pharynx, the instrument just described must be so constructed, that the blade shall stand upon the convex side of the curve of the sound. In performing the operation, the patient's head held steady in a good light, and the tongue depressed by an assistant, the sound is to be passed down lightly in contact with the back of the throat, till caught in the little pouch; the ball is then to be gently raised out of the pouch, and by the moveable wire the blade is to be opened, and the instrument in this position again passed downwards; the probe point will be immediately felt to have reached the bottom of the pouch, and the wire now left at liberty, the spring again closing the blade, the membrane is divided, and the operation finished.

100. The complete success of the operation may be ascertained, by passing a small and slightly curved elastic bougie, keeping it in gentle contact with the back of the canal; before the operation the point would thus have been caught in the pouch, but now the obstruction will not be perceived. This point determined, the bougie may be passed once a-day for a fortnight, to prevent the possibility of any re-union.

101. Although if the above operation was properly performed, there could, as it appears to me, be little or no risk of hæmorrhage, it may be right to keep the stomach and bowels clear for a few days afterward, by directing an infusion of roses, with sulphate of magnesia, to be taken occasionally.

102. I have thus rather fully considered the nature of a very rare affection of the cæso-phagus, and have been also led to suggest an operation for its early cure; the subject is of some interest, the complaint being one of those most terrible to endure, which eventually destroys by starvation; and it is remarkable, that in the case that fell under Dr. HUNTER's notice, although bougies and sounds were endeavoured to be passed, no clear idea seems to have been entertained, in time, of the nature of the disease, and the patient was consequently left to perish, without any effective effort being made, or thought of, for saving him.

103. Spasm of the cæso-phagus (34.) not very unfrequently proves a source of distress, and sometimes requires to be relieved. Where this complaint is of a transitory nature, and not apparently confined to one point, but shifting from one part of the canal to another, it may commonly be removed by an opiate; either given by the mouth, or administered as an enema. With the same view, volatile and other antispasmodic medicines may occasionally be directed; and in fact the treatment most successful in hysteria, will generally be equally applicable to the relief of this particular complaint, as a symptom, which it frequently is, of that disease.

104. It has sometimes happened, that spasmodic contraction of the cæso-phagus has resisted almost every plan of medical treatment; tonics, baths hot and cold, opiates, anodynes, electricity, and blisters, all failing to relieve. Such a case is related by Dr. SEQUIRA, of a youth, first attacked with incessant dry cough, and coldness at the præcordia,

succeeded by a most distressing train of nervous symptoms, with pains darting through the body and limbs with convulsions. In eight months he suddenly and so entirely lost the power of swallowing, that glysters were his only support. It is not a little remarkable that in this case, where so much medical activity was exerted, there was so little knowledge of surgery manifested; a strong proof of the inexpediency of the arbitrary division of practice into medical and surgical. Mercurial frictions were now had resourse to, and assiduously continued, till on the sixth day his mouth became sore, and he found that in gargling his throat with milk and water, a little passed down; in a few hours the power of deglutition was perfectly restored, and all the nervous symptoms and pains vanished also, as by a charm.*

105. The present attack of spasm removed, its disposition to return may often be lessened by the adoption of means for improving the general health. Change of air, regular exercise, strict attention to the bowels, with the observance of a nutritious diet, are to be recommended. The most proper medicines, upon these occasions, will be either the vegetable tonics, or preparations of steel.

106. Where, together with tendency to spasm in the œsophagus, the patient is subject to oppression from excessive flatulence (36.); the latter affection, appearing to be merely a symptom of that particular kind of dyspepsia, always more or less distinctly connected with a disposition to hysteria, may generally be relieved by the remedies just recommended (103.).

107. Spasmodic stricture in the œsophagus is generally capable of being promptly relieved by the introduction of a bougie. The exact seat of the stricture, and diameter of the passage through it, first ascertained by passing the œsophagus sound, the elastic gum bougie, of a size fitted for mode-

* Med. Obs. and Inquiries, vol. vi.

rately dilating the constricted part, may then be curved, oiled, and introduced into the throat; and made to press gently against the stricture. It usually happens that the contact at first excites slight sickness, after which I have always observed, that from repeated efforts at rejection, the pharynx becomes suddenly passive, and the instrument immediately slips through. It is to be retained in the stricture for the space of three, five, or ten minutes, according to circumstances.

108. The frequency with which the operation of passing a bougie should be repeated, and the length of time it is allowed to remain, must be regulated by circumstances. In some patients the throat is naturally irritable, and keeping an instrument in the stricture is attended with distress, rendering it necessary to pass the bougie as seldom as possible; while in others the power of bearing the bougie patiently is soon acquired, it remains quietly in its place, and the surgeon is thus left at liberty to effect the dilatation more gradually.

109. In some cases of spasmodic stricture, the spasm from some previous state of excessive irritation or other disturbance, is attended with a slow change in the structure of the part, which becomes more or less consolidated. Of this possible change every surgeon should be aware, in giving or forming an opinion upon what may appear, from the relation of the early circumstances of the case, a purely spasmodic complaint. Thus circumstanced, the contraction will give way very slowly; and, without using too much pressure, or perhaps even with it, cannot be overcome rapidly. Such state approaches nearly to permanent stricture, and will require to be treated with much more care, patience, and reserve, than mere spasm. The course of treatment by bougies must be slow, and the necessary increase in the size of the instrument gradual; for if the diameter of the bougie is quickly increased, or the efforts to pass the contraction un-

gentle, the stricture may become the seat not only of irritation, but of inflammation; and the patient be worse instead of better, for his treatment.

110. The occasionally serious importance of stricture from pure spasm, is well illustrated by one of the cases above mentioned (41.), where the patient was actually lost for want of power to take food; although no trace or vestige of obstruction or disease was found after death.

111. Where, from the attentive consideration of the history and symptoms of the case, there is reason to suspect spasmodic stricture in the œsophagus is merely an indication of some primary disease elsewhere, the practitioner must form a guarded opinion; and while he hopes to be able to relieve an effect, he must not permit the family to believe that he is contending with the cause. He is bound to state his apprehensions as well as his hopes, if not to the patient, at least to the friends; it is an attention due to their feelings, no less than to his own character.

112. In those cases where disease exists in some of the neighbouring viscera, proper medical care must be directed to the checking its progress, or preventing its consequences, so far as these objects may be attainable; the principal surgical attention will commonly be that of relieving the tendency to spasm and contraction in the œsophagus.

113. Permanent stricture in the œsophagus, though generally a serious complaint, will, under attentive management, very frequently yield to a steady yet cautious perseverance in the use of bougies; as in the case of spasmodic stricture. Observation, however, has shown (45.), that where the spasmodic stricture has a tendency to take on the permanent character, the progressive relief under treatment is much more slow; a circumstance important to bear in recollection, for the support

of confidence in the patient, and perseverance in the surgeon.

114. It sometimes happens, that where the muscular power of the œsophagus is unable to overcome an obstruction from stricture or tumor in the passage, food may still be introduced by assisting that power by external pressure ; as by the pressure of the external part of the throat, with the finger and thumb (Case 11.), or by an instrument passed down after the food (115.). GOOCH mentions a woman who, long subject to a difficulty in swallowing, was obliged, for some years before she died, to use a whalebone with a small button at its end, to propel the food beyond the obstructed part; which as a small tumor, could be felt by external examination. A week before she died, inflammation supervened ; which rendering it impossible to swallow fluids, or get down solids, soon proved fatal. On examination, the mucous membrane of the canal near its upper end was much thickened, for the extent of two or three inches ; and in the midst of this space a tumor, the size of a large nutmeg, was situated.*

115. A case somewhat similar to the above ; is referred to in a paper by M. HEVIN, where a man long subject to the rejection of almost the whole of his aliment, liquid or solid, soon after they were swallowed, used various means for his relief to no purpose. WILLIS, to whom the patient applied, concluding some obstruction existed at the lower part of the canal, made a long small flexible instrument of whalebone, with a bit of sponge at its extremity. As soon as the patient had swallowed some food, he passed this instrument down ; and removed the obstacle by thus facilitating the passage into the stomach ; and the patient was, by this means, supported for sixteen years.†

116. Where the appearance of the expectorated matter gives reason to believe ulceration has taken

* Cases and Remarks in Surgery.

† Memoirs of the Royal Academy of Surgery, of Paris.

place, we must endeavour, by a careful review of all the circumstances of the case, to form a correct opinion as to its most probable seat, extent, and tendency, never, however, losing sight of this important maxim, that in all such cases we must rather be directed from day to day by the symptoms, than be regulated by opinions previously formed. One of the leading objects, in general, is to keep the constitutional powers and actions as near the standard of health, as possible; under the conviction that nature has more power than art, and in the hope that by this means her salutary efforts may be assisted.

117. Should a quick pulse, with other febrile or inflammatory symptoms, be present, the increased action must be moderated by some of the means already pointed out (63.). Where fever is absent, balsamic medicines may under some circumstances be tried with advantage, but always with this reserve, that if they excite heat and thirst, they must be laid aside. Should, however, the continued progress of emaciation, as well as of purulent expectoration, bespeak increasing danger, the patient, if not under any particular treatment at the time, rendering it improper, may be recommended to try a change of air; if in London, he may be recommended to visit the more mild, and less unsteady, atmosphere of the west of England. The good effects of change of air sometimes exceed belief.

118. The importance of maintaining regular action of the bowels, is not less in these, than in most other complaints, to which the human body is liable; neither should the practitioner rest satisfied with knowing the bowels have acted, for the still more important question yet remains,—as to how they have acted. Observation furnishes many instances, in which sensible persons have been lulled into false security, by the bowels appearing to render their contents freely, when in fact the most obnoxious matters have been nevertheless retained

from day to day, and from week to week; and this while the patient had regular evacuations every day. These truths, however, I have so lately endeavoured to demonstrate, as to render it unnecessary to repeat what is there said upon the subject.*

119. Difficulty in swallowing becomes occasionally the leading source of distress in the latter, as well as frequently in the earlier stages, of these diseases. Under this predicament, it may sometimes be practicable to pass a bougie, or a hollow canula of flexible gum, down into the stomach; and by the latter means strong broths, milk, and other nutritious fluids, may be introduced in sufficient quantity to support life. Where, on the other hand, all endeavours fail to render the *œsophagus* pervious, our only remaining resource is to supply nutritious injections by the rectum, an expedient sometimes extremely useful, in procrastinating the fatal event of the disease. (121.)

120. Where fungus hæmatodes or soft cancer exists, the necessary treatment will vary but little from that above recommended. This disease as far as I have had an opportunity of observing it, is not attended with the sharp lancinating pains which generally distinguish true cancer, although it is productive of a similar sense of local heat, and followed by the same extreme emaciation.

121. Excessive constitutional irritation, as well as local pain, is more effectually soothed into repose by opiates and other anodynes in this, than in almost any of the preceding forms of disease; and upon these medicines therefore we must chiefly rely. Unhappily, however, we sometimes are unable, by any expedient, to convey either medicines, or food, into the stomach; under this difficulty the remedies in a fluid state may be injected into the rectum, or as an extract may be passed in form

* See Pract. Obs. on the Diseases of the Lower Bowels, &c.

of suppository, to the same part; or lastly, should all these methods fail, it may, as an anodyne embrocation or plaster, be applied to the external surface of the body.

122. When stricture in the œsophagus assumes the character or scirrhus of cancerous disease, the treatment, which, as in the preceding or soft variety of cancer, consists in palliating the symptoms, must have for its object the keeping the constitution under the permanent control of an anodyne influence. In directing the treatment upon this principle, it may be, however, occasionally necessary to vary the agency, by changing the medicine. Upon some occasions the saline draught with saturated lemon juice, combined with opium, will answer extremely well for a time, after which it may require to be changed for an opiate combined with cicuta, or hyoscyamus; with the addition, perhaps, of some ætherial medicine. Opium, however, is our main dependance and sheet anchor, in these most distressing diseases.

PART II.

123. HAVING in the foregoing pages pointed out some of the many deviations from health, in function and structure to which the parts forming the throat and œsophagus are subject, we may now proceed to consider the disorders that more immediately regard the stomach ; and although it is intended to confine the present remarks within a limited space, the subject itself is of great extent, and of no less interest and importance.

124. Something of the importance of the function of digestion may indeed be inferred, from the comparatively central situation assigned in most animal bodies, for its performance. The high importance of this function is, however, more clearly manifested, by taking into account the extensive, or rather universal, consent and sympathy established between the digestive organs and all the other parts of the body ; a sympathy of so unqualified a cast, that it has been asserted and sufficiently proved by one of the first physiologists and best surgeons of the present age, that many, if not most, of the complaints that afflict human nature may frequently be relieved, or removed, by making a judicious appeal to this most important and interesting department of the economy.

125. Before, however, entering upon the disorders and diseases of the stomach, it may perhaps be worth while to take a cursory and comparative view of the function of digestion, as traced upon the ascending scale of animal life ; a sketch of this kind, though rapid and imperfect, may not tend to diminish the interest of the subject of the present essay.

126. It may be doubted whether, in the consideration of the varying forms and functions of parts in the living system, our admiration is most powerfully called forth by the astonishing simplicity sometimes displayed, or by the variety of means occasionally employed, to accomplish one and the same end, in the extensive circle of animated nature.

127. The function of digestion, and consequently the possession of an apparatus or stomach, for carrying it on, has been regarded by most naturalists as the distinguishing characteristic of animal life.

128. In the lowest orders of animal existence, it would appear that the vessels circulating the nutritious fluid through the body, must possess a power of converting or digesting their contents, so far at least as is necessary for affording the scanty supplies of which they may stand in need. In the small flat worms, or flukes, occasionally found in the gall ducts of sheep, the bile absorbed by an orifice or mouth, is distributed by a single vessel only, branching into all parts of the body of the animal. In the small pellucid *Dygæsa*, also, long strings of which I had in 1801 an opportunity of picking up and examining alive, in the Bay of Biscay, the functions of digestion and circulation appeared to be identified in the minute, spherical, opaque, red mass, that like a coriander seed occupied the centre of one end of the brilliant and contractile body * of the little animal; from which sphere a single bright red vessel was seen to pass, throwing off ramifications into the clear substance of its body.

129. The hydatid, constituted of a single scarcely opaque membranous cyst, filled with a watery

* The elliptical, crystalline, and highly refractive body of this little animal, three fourths of an inch in length, was observed to undergo a regular vibratory contraction; examined by my stop watch, these contractions were found to be as frequent as seventy in the minute.

fluid, presents one of the simplest forms of organized life that can well be conceived; provided the general opinion be correct, that they derive support, and increase by absorption, from without.

130. The organization subservient to the purposes of nutrition in the small fresh water polypus, seems to be confined to a mere bag, which receiving, food, contracts upon it, until the purposes of digestion being answered, the opening is again relaxed, and the residue cast forth.

131. In admiring one of the least complicated varieties of the Mollusca, I have watched with interest in the Bay of Gibraltar the vibrations of the delicate cup-like Medusa, the alternate contractions of the circumference of which impelled it gently through the illuminated wave, imparting unceasing and beautiful action to the light and graceful tentacula. The digestive apparatus in this animal appeared to consist of little more than a cavity or bag, capable of reducing its contents to a pulp, and communicating with canals that passed in the manner of nutrient vessels, from the stomach to the body and tentacula.

132. Rising progressively in the scale of creation, we find the stomach instead of receiving its food, and rejecting the remains by the same opening, is provided with a distinct passage for each of these purposes; to the digesting cavity is added an intestinal tube, of which the contents are subjected to still further changes; and in the higher order of animals, various fluids are poured in upon them, to assist in the perfect elaboration of the nutritious matter.

133. The process of digestion, which differs much in the different classes of animals, implies in the more perfect orders a series or regular succession of operations. In most orders of the Mammalia the food is first subjected to mastication; it is crushed between the teeth, mingled with the saliva, and in that state passes down into the stomach. Car-

nivorous animals have their sharp teeth rather formed for tearing their prey ; while those that live on vegetable food are furnished with what are aptly enough termed grinding teeth. Many reptiles, and particularly those birds that feed on fish, swallow their prey entire. Snakes and serpents, when they have killed an animal, swallow it whole ; and to facilitate its passage into the stomach, some species are in the habit of passing their tongue over the body of the prey, covering it with saliva.

134. The readiness with which the œsophagus and stomach dilate in these and some other animals, is astonishing. While residing in the Island of Minorca, in 1801, I found a snake coiled up in a pigeon's nest ; it was in the act of swallowing one of the pigeon's eggs, which, bigger than its own head, was passing slowly down its throat. On another occasion, opening some sea-gulls just shot, in the Bay of Gibraltar, I found in the stomach of one six or seven fish, each very nearly the length of the body of the bird ; they were of course packed tolerably close, the stomach and gullet forming one large sac, filling as nearly as possible all the abdominal space, and extending from the throat down to the rump.

135. In those birds that live upon grain and other vegetable matter, the food is usually first received into a membranous bag or crop, a dilatation of the gullet, where by maceration in warmth and moisture, it is prepared for subsequent digestion in the gizzard, in which it is in most cases subjected not only to the powerful influence of solvent fluids, but to the still more powerful action of trituration, between the strong muscular sides of the cavity.

136. Animals that ruminate have the power of returning the food into the mouth, for the purpose of more complete mastication. I had an opportunity, when in South America, of witnessing a similar power exerted under the influence of fear, as a means of defence, by the beautiful and timid Lla-

ma, a native of the mountainous parts of Peru. This animal has not only the power of regurgitating its food, but also of throwing it from the mouth, when angry or alarmed. MR. HUNTER has observed, that the crop of the pigeon secretes a fluid conducive to the nourishment of the young. I have also sometimes watched the canary bird, while engaged in feeding her young with soft food previously taken into her own mouth; and have observed, that it is always passed down for a minute or two into the crop of the old bird, whence subjected to the influence of the secretion peculiar to that bag, it is presently returned in small parcels, better adapted for digestion by the weaker power of the unfledged brood.

137. The changes induced by digestion are of a chemical, as well as mechanical nature. So far as regards the reduction of the food by maceration in the warmth and moisture of the solvent fluids of the stomach, the process may be considered as more immediately chemical; but in those cases where, from the structure of the stomach, the contents are subject to considerable pressure and active trituration, it is reasonable to consider that the prevailing power is mechanical. Indeed, when we attentively reflect on the ingenuity of the contrivances adopted by nature in certain cases for rendering the digestive process complete, by means most consistent with the habits and convenience of particular animals, we cannot help seeing in them so many examples of that consummate art and wisdom, which can be traced only in the operations of the Supreme Intelligence.

138. In birds that live on grain and vegetable substances, in whom strong and heavy grinding teeth would have been extremely inconvenient, the lower portion of the stomach or gizzard is strong, muscular, and extremely powerful, being so constructed, that the sides are capable of motion upon each other, with a force that has been proved by experi-

ment to be sufficient for crushing and reducing the hardest substances.

139. In some Crustaceous animals, as the lobster, teeth are provided in the stomach ; and in the sea-egg, or Echinus, it is impossible to examine without astonishment the excellent mechanism by which the digestive apparatus, not forming two portable millstones, as in the gizzard of birds, nor furnished with teeth as in the stomach of the lobster, is constituted of five or six delicate and light yet strong osseous frames, all formed upon one model, loosely set together into a cone ; the reciprocal action of each part with the rest being regulated by a set of minute hinges, attached by ligaments round the margin of the base ; the line of trituration, and consequent course of the food, being that of the axis of the cone, through the centre of this most ingenious and curious little machine.

140. The stomachs of many kinds of birds possess what has been correctly termed an intermediate structure, displaying as it does a medium degree of strength between the extreme power of the muscular gizzard, and the delicacy of the simply membranous and scarcely muscular cavity. The birds in which this structure occurs, including the raven, owl, heron, and others, have the power of rejecting by the mouth the indigestible remains of their food.

141. Most of the rapacious birds, and beasts of prey, have membranous stomachs ; of which kind is also the human stomach, which may be regarded as the connecting link between those fitted only for digesting vegetable substances, and those of animals that are entirely carnivorous.

142. The human stomach has been occasionally seen divided into two portions, by a central contraction of its circular fibres. This circumstance, which, connected with disease, is described by MORGAGNI, has been also observed by Sir E. HOME, and viewed as a state necessarily connected with the healthy functions of the organ ; and it appears to

me extremely probable, that although this condition of stomach, being a mere muscular contraction, can rarely be detected after death, many of the violently severe attacks of pain to which some persons are subject at the pit of the stomach, are to be referred to excessive, and therefore painful, muscular contraction, or spasm, of this viscus. (183.)

143. It has indeed been asserted, that the very idea of muscular contraction remaining after death is not only unreasonable, but ridiculous; and so perhaps it may be in fancy, but it is not so in fact. Neither are we, I conceive, yet so far advanced in knowledge as to be exactly warranted in rejecting facts, because they may stand opposed to the conclusions of speculation.

144. In post mortem examinations, I have in several instances found the healthy stomach moderately distended with air, and have particularly remarked this peculiar condition. The cardiac portion inflated to about six, the pyloric to about five inches, and the central contraction scarcely to one inch in diameter. The contracted part, in three instances, exactly resembled in texture, the other parts of the organ, except in being rather thicker. Upon handling and disturbing the viscus, and especially on slightly pressing the inflated portions, the contraction was gradually overcome, and in a short time had so perfectly vanished, that its previous seat could no longer be determined. Were it doubtful whether these appearances were produced by muscular contraction alone, I might add, that I have often seen, and preserved notes of, similar appearances in healthy portions of the small intestines, contracted for some extent to the diameter of a goose-quill, and becoming again relaxed, upon gently pressing in air from the next inflated part of the bowel.

145. Before we proceed to consider particularly the deviations from healthy action, it may not be improper briefly to recapitulate the circum-

stances necessary to the perfect performance of the healthy functions of the stomach ; and I shall take the liberty of doing so in the concise yet perspicuous terms of one of our most distinguished Authors, who states digestion to be “ the change that the food undergoes in the stomach, by which it is converted into chyme. The circumstances necessary to effect a healthy digestion of the food are, 1. A certain degree of heat of the stomach. 2. A free mixture of saliva with the food in the mouth. 3. A certain quantity of healthy gastric juice. 4. The natural peristaltic motion of the stomach. 5. The pressure of the contraction and relaxation of the abdominal muscles and diaphragm. From these circumstances, the particles of the food are softened, dissolved, diluted, and intimately mixed into a soft pap, called chyme, which passes through the pylorus of the stomach into the duodenum.”*

146. The healthy functions of the stomach are liable to sympathetic disturbance under many affections of the brain. As one of the slightest instances of this kind, I conceive the distressing sense of confusion in the head, and consequent vomiting, in sea-sickness, may be mentioned. In protracted cases of this sort, I have seen the distressing nervous symptoms continue several months, with almost total suspension of the digestive powers; while the frequent straining has repeatedly lacerated the inner membrane of the fauces, inducing hæmorrhage ; the disorder eventually leaving the patient little else than a skeleton. Yet upon reaching shore, the head relieved from its indescribable feelings of distress, the stomach though weak became tranquil, and its powers were re-established. This was the case with a gentleman advised to take a sea voyage for the cure of a spitting of blood ; and it certainly did cure it, although by a process his physicians little calculated upon. The long continuance of

* Dr. HOOPER's Med. Dictionary.

sickness, and consequent want of support, soon reducing the vascular system to so low an ebb, as effectually cured the complaint; the physical powers being at the same time so depressed, that any movement of body induced cramps and spasms even in the abdominal muscles. The bleeding vessel in the lungs, however, closed; and never afterwards gave way. (277.)

147. Injuries of the head, from external violence, under whatever circumstances they occur, most frequently induce immediate disturbance of the stomach, with complete suspension of its powers, sometimes attended with sickness and vomiting. I have seen the same effects follow, where effusion of blood upon the brain has taken place suddenly, without the intervention of external violence, as happens in many attacks of sanguineous apoplexy. In serous effusion upon the brain, sickness at stomach is not I believe so frequent a symptom; if that variety of the complaint, induced by drinking, be excepted. (173.)

148. In those affections of head, that arise from chronic inflammation of the membranes of the brain, with purulent effusion, the only sympathetic affection of stomach that I have usually observed has been a suspension of its functions, or total want of appetite, without sickness. In the febrile complaints of this country, although sickness and vomiting may produce no distinct evidence of the stomach having been improperly loaded, the precise relation of cause and effect is often so obscure, as to prevent the drawing any satisfactory conclusion.

149. Any material disturbance of the functions of the stomach, from acute disease within the chest, does not appear to be one of the most common sympathetic derangements to which this viscus is subject.

150. In most affections of the viscera of the abdomen, however, the stomach is liable to power-

ful sympathetic influence. By some of the derangements and even diseases of the liver, it is true, the stomach appears to be little disturbed, but in other complaints, particularly those induced by the presence of biliary calculi, dyspepsia with permanent and extreme irritability of stomach, is very apt to occur; and under the excitement, or spasm of the gall-ducts, connected with the passage of gall-stones, the most severe distress and suffering appearing to arise from spasmodic pain in the stomach, with vomiting, very constantly take place. (189.)

151. With affections of spleen, as far as I have had an opportunity of observing them, the stomach appears generally disposed to sympathize. (226.)

152. In painful or spasmodic complaints in the kidneys, or ureters, especially under calculous disorders, irritability of stomach, with suspension of its powers, and frequently sickness and vomiting take place, and in time these symptoms become occasionally so identified with the original disorder, as to assume the appearance rather of the cause, than effect, of the patient's sufferings (306.)

153. In states of excessive tone or of laxity, irritability, ulceration, some kinds of stricture, and other diseases of the bowels, a sympathetic disturbance and deficiency in the digestive powers, often combined with sickness at stomach, are among the most common symptoms.

154. The above remarks particularize some few of the most ordinary cases, in which the active functions of the stomach are subject to diminution or suspension, from sympathy with existing derangement in other parts of the system; in fact, there is no part so distant, nor any point so insignificant, as not to have occasionally extended its powers of disturbance to the digestive organs, from the influence of remote disease.

155. Neither is there, on the other hand, any want of disposition in other parts, to sympathize with the various disorders and diseases that origin-

ate in the stomach; as indeed has been already intimated. (124.) Nothing is more common than to meet with complaints in the head, many of them of a very serious description, which by the most accurate observers would be referred solely to derangement of stomach and bowels, or in other words to disorder in the digestive organs. Such cases in fact, so often occur, that almost every medical man is aware that however the question of cause and effect may be determined, he has only to set right the state of stomach, and the complaint in the head gives way. Many such I have had under my care, where a distressing swimming in the head, and alarming giddiness, or habitual attacks of most severe head-ach, were only attended with an apathy of stomach; a total absence of desire for food, and want of power to digest it, if taken. In one of these cases, a gentleman had for this complaint long been in the habit of frequently losing blood by cupping, under the direction of his physician, and felt at last as uneasy at the idea of the remedy, as of the disease. By a course of medical and surgical treatment, to restore power to the stomach and action to the bowels, the complaint in the head was perfectly removed; and from that time to this (six years) he has had, I believe, no return. In another, which in severity at least, was similar to the above, the correction of habitual derangement of the stomach and bowels, and the removal of a disease from the lower extremity of that canal, entirely cured a complaint in the head of many years standing, which had frequently confined the patient to his bed for days together.* An instance of a very similar nature, will be stated in the course of the present observations. (Case 12.)

156. In many disorders within the head, and

* Practical Observations on Diseases of the Lower Bowels, &c. Third edition. Cases 76. and 90.

those of the most fatal character, particularly in hydrocephalus, it is the opinion of many of the best practitioners, that the whole of the mischief originates in disordered stomach and bowels, or derangement of the digestive organs; and that such disorder is at least a concomitant, is demonstrable to any one who will take the trouble to inspect what passes the bowels in that disease.

157. In fact, most of the complaints that occur within the head may be induced or increased by want of proper attention to the state of the stomach and bowels; and the imperfect performance of the function of digestion, is no less instrumental in exciting diseased action elsewhere.

158. Many individuals are habitually subject to violent palpitation at the heart, and in every such instance, of which I have been able to trace the history, or watch the progress, it has appeared to be the result of derangement in the digestive functions, judging from the irregular and generally torpid state of bowels which has attended, and particularly from the great relief, if not perfect removal, of the distressing pectoral symptoms, always obtained by directing the attention to the feelings and functions of the abdominal viscera. The same reasoning applies to the occasionally formidable consequences of habitual palpitations, particularly enlargement with disease of the heart; for, although in these latter stages of progressive ill, it may be in vain to attempt its removal, we nevertheless find, that the only intervals of real comfort and tranquillity are still obtained solely by a skilful management of the functions of the digestive organs, and of those viscera subservient to them, particularly the liver.

159. In other spasmodic affections of the chest, and especially in asthma, there is the strongest reason to believe derangement of stomach has very much to do, if it is not the principle cause. Upon this point Dr. HOOPER says, "Dyspepsia always

prevails, and appears to be a very prominent feature in the predisposition." In fact the precursors of the attack lead to the same conclusion, as "on the preceding evening the spirits are often much affected, the patient experiences a sense of fulness about the stomach, lassitude, drowsiness, and pain in the head."

160. In the numerous disorders and diseases produced by excess in drinking, it commonly happens that the first ill consequence is a dyspeptic state of stomach, the continued influence of which appears to induce other affections, which sooner or later terminate fatally. (171.)

161. The valuable labours of several excellent writers of the present day have sufficiently shewn, that derangement in the functions of the digestive organs is the true origin and source of most of the distressing varieties of calculous complaints; although it is to be lamented that the knowledge of the seat of the cause does not more frequently enable us to direct efficient remedies for these painful and tedious disorders.

162. In truth, I believe there is no derangement of function or structure, however remote, but may be influenced, and frequently within half an hour be changed in all its feelings, by slightly modifying the nature of the contents, thus qualifying the results of chemical and vital action, in the stomach. I am intimately acquainted with a gentleman, who from a blow on the leg has for some years had a swelling on the shin. His own feelings have taught him, that if, while free from any local uneasiness, he eats the least bit of unripe orange, or even a ripe grape, he is sure within ten minutes to feel pain in the swelling upon the leg which continues to be troublesome for the rest of the day. The invaluable writings of Mr. ABERNETHY are full of similar illustrations, and afford a most luminous series of practical observations, all of them converging to one point; demonstrative of the importance of paying, in every

case, strict attention to the manner in which the functions of the digestive organs are performed; whatever may be the nature, or wherever the seat, of the more evident derangement.

163. Among the most frequent disorders of stomach, is one which manifests itself chiefly by habitual failure of energy, inducing the patient to select the lightest, and often the least nutritious diet; making choice of pastry and vegetables, in preference to animal food. This state of stomach, with a soft quiet pulse, clean tongue, and pale skin, is by some supposed to indicate a bilious tendency, but considering the usually confined state of bowels, as the combined result of long established debility, and imperfect digestion of the food, it does not seem necessary to assume any additional circumstance to explain the symptoms; neither would the general appearance of the alvine evacuations I believe, warrant the assumption that the functions of the liver were materially disturbed.

164. This state of stomach is commonly connected with great excitability of the nervous system, and often productive of violent throbbing, or transitory attacks of giddiness and swimming in the head, which symptoms, as already noticed, sometimes assume an alarming aspect. (155.) A lady, almost unable to walk across a room without falling, from this cause, observed to me she had been advised to lose blood, but that experience had satisfied her that would not answer, having on a former similar occasion applied leeches, when her giddiness became suddenly so much more alarming, that words could convey no idea of what she then suffered for several successive days.

165. Few complaints of stomach are, I conceive, more manageable, and therefore less alarming than this, provided the case has not been too long neglected. The concomitant derangement in the functions of the brain, however, is of a more serious character; a character that I have traced from

so many different points of view, as to ascertain pretty clearly that if, from long inattention to the state of stomach, the disorder in the head continues to make progress beyond a certain point, it becomes a case of oppressed brain; the circulation within the head languishes, the memory fails, irresistible drowsiness supervenes, in the midst of which the senses are still watchful, till at length the patient is carried off by the establishment of serous apoplexy.* (Case 12.)

166. In some cases, the symptomatic affection of brain is severely painful, assuming the form of what has been termed, a sick head-ach; the aggravated disorder of stomach being occasionally relieved upon the rejection of its contents. The matter thrown up by some patients on these occasions is bilious, in other cases principally a viscid ropy mucus, or sour fluid, compared to vinegar or vitriol. In some remarks upon this subject, Dr. FOTHERGILL, considered the complaint to depend on derangement of stomach, and disordered secretion of bile, giving it as his opinion, that a sudden giddiness arose more frequently from some disorder of the stomach, than from all other causes put together.†

167. Deficient power of digestion occasionally appears to arise from a vitiated state of the gastric juice, which is prone to convert whatever is taken into a viscid mucous or acid matter. In some cases this may be traced as the prevailing tendency of stomach from childhood upwards, bringing forward its fruit in the occasional enlargement, and perhaps suppuration, of a gland or two in the neck; unveiling, in my opinion, the true origin and foundation of the scrofulous habit. In these cases, I have

* A striking example of this termination of the disease, I attended during the last few days of his life, in a poor man whose interesting case is related in my treatise on the Diseases of the Urine and Urinary Organs, Case 39.

† Med. Obs. and Enquiries, vol. vi.

repeatedly been told that the complaint had been referred by others to deficient secretion of bile ; an opinion rather borne out by the prevailing light tinge of the evacuations, until explained by sifting out that the diet usually consisted of little else than vegetable matters and milk.

168. It is important to know, that this state of stomach will keep the constitutional health in a very deranged state for an indefinite length of time. It is of equal importance also to be aware, that it may do so without itself forming any very prominent feature in the history. It may not excite much attention, or may be entirely overlooked. The recollection of these facts, will enable the vigilant practitioner to make out, and at length distinctly see the cause, when called in to relieve some remote effect, prompting him to the adoption of measures by which the progressive, though chronic, derangement in the health may be seasonably arrested ; the constitution being obliged, as it were, slowly to retrace its steps, from a state that would ultimately terminate either in pulmonary consumption, or other distinctly scrofulous disease, back to the enjoyment of those feelings which are the exclusive privilege of health.

169. A dyspeptic affection of stomach, by no means common, though of very serious importance when it does occur, I have once seen arising from sympathy with the gravid uterus, in a first pregnancy. The patient was a lady of very delicate constitution, but the tendency to sickness, more troublesome than common, excited no material uneasiness till in the sixth month the extreme irritability of stomach became so severe, that added to what she suffered during the day, she was constantly disturbed from sleep at night, with sickness and most desperately severe retching ; the violence of straining bringing tears from the eyes, perspiration from the skin, and not unfrequently blood, with the glairy or acid mucus, from the stomach.

Saline medicines, with opiates and anodynes, internally directed and externally applied, somewhat allayed her suffering, but for months she took so little, and suffered so much, as to be frequently in great danger, and there seemed at best to be very little chance of her retaining strength enough to enable her to get through her confinement; eventually, however, she did well. (322.)

170. A similar state of stomach to the above, has in some rare instances arisen from external violence. A case of this kind is related by Dr. W. HUNTER. A boy aged eight years, became affected with great pain at the stomach, frequent and violent vomiting, with excessive consequent emaciation of some months' continuance. From the total loss of appetite, and the rejection of almost every thing swallowed, he was evidently most seriously ill, and every day becoming worse, when Dr. H. first visited him, and found that opiates, and a variety of other medicines, had been tried without success. Upon inquiry it appeared, that this disorder had arisen from a violent shake at school, where the usher for some imputed fault, was said to have grasped his waistcoat opposite the pit of his stomach, shaking him roughly; the complaint commencing soon after.* (323.)

171. In those destructive complaints induced by intemperance in drinking, we see that the earliest ill consequence of continued excess, is a declension of appetite, which goes on to a total want not only of desire for food, but of power to retain it. This exhaustion of power is so complete, that frequently nothing will stay on the stomach, but ardent or spiced spirits. All healthy function superseded, even should food be occasionally retained, it is left to undergo the ordinary changes that warmth and moisture would produce out of the body. In passing the small intestines, a spontaneous pro-

* Med. Observ. and Enquiries, vol. vi.

cess takes place, usually productive of flatulency, and often running on to the acetous fermentation; and during its residence in the great intestines, still further blended with the depraved secretions of the canal, and still further advanced in decomposition, the whole mass conveys so much irritation to the already excited, and too irritable cavity of the canal, as not unfrequently induces extensive ulceration in the bowels. These consequences I have in several instances traced after death.*

172. Where a long course of excess ends fatally, it often happens that the destruction of the digestive powers, is followed by deranged functions or diseased structure in the liver. This disease of liver, as far as I have observed, has generally had the appearance of an interstitial deposit into the substance of the gland, somewhat resembling a scrofulous or cheesy matter, most commonly forming either very numerous small tubercles, of a light or bilious tinge; or sometimes exhibiting large tubercles or tumors, few in number. In the first case, there is usually a general contraction and increased firmness of the whole substance of the gland, appearing to depend on a morbid state of the connecting cellular tissue of the viscus; in the second case, where from the excess of interstitial deposit, the mass of the liver is greatly increased, the diseased condition of the cellular tissue is very demonstrable, with conversion into fasciculated and ligamentous fibres, nearly resembling what happens in cancerous disease. A singularly perfect specimen of the latter variety of disease, is preserved in the morbid anatomical collection of Dr. HOOPER.

173. In cases, where from intemperance, the loss of energy in the stomach has led to ill consequences more immediately depending on the habitually

* Pract. Observ. on Disease of the Lower Bowels, &c. 126. and Case 42.

excessive excitement of the nervous powers, delirium of a peculiar character, and oppressed brain from a peculiar cause, progressively ensue. Under these circumstances also, if the complaints are not cured, the event is fatal. But what do we learn by diligent examination after death? that the ultimate consequence of long suspension of the digestive process, is an absolute deficiency in the necessary supplies of nutritious matter to the vascular system; and that instead of the proper constituents of healthy blood, the vessels large and small, especially those within the head, contain a fluid which, in the transparent veins of the brain, appears like water scarcely tinged, and in the arteries is pale and thin, from the great deficiency in the quality and quantity of crassamentum. (Cases 14, 15, 16, 17.)

174. In a most interesting paper by Dr. ARMSTRONG, of Sunderland, under the title of Brain Fever, the peculiar state of brain that exists in this complaint is accurately described, which, by disturbance and oppression of its functions, probably becomes a means of keeping up the extreme debility of stomach, as well as of most other parts of the body. At the conclusion of his valuable remarks, Dr. A. laments with laudable zeal that repeated solicitation (in a fatal case,) failed in obtaining permission to examine the head after death; persuaded that dissection alone can fully determine whether this disease admits of any material variety of treatment.* I hold myself fortunate, that from the kind attention of friends, and other circumstances, I have had repeated opportunities for ascertaining with precision, the condition of the brain, and other viscera, when affected from this cause; and have thus been enabled, I trust, to throw some useful light upon this important part of pathology.

* Edinburgh Medical Journal, vol. ix.

175. It occasionally happens that affection of stomach from excessive drinking, is not confined to suspension of its healthy functions. I have attended in one case, where, after being subject many years to frequently returning attacks of burning heat at stomach, irritability and vomiting, the patient died rather suddenly ; from chronic inflammation having terminated in a general effusion of purulent and coagulable matter, into the cellular texture between the coats of the stomach (Case 18.). There is reason to believe that chronic excitement from this cause, has in many instances laid the remote foundation of disease in the stomach, which has eventually become cancerous.

176. The stomach, in common with the other parts of the alimentary canal, is occasionally subjected to acute or phlegmonous inflammation. The causes may be, any acrid or poisonous substances, or improper food ; large draughts of cold liquor, the body being heated by exercise ; the repulsion of eruptive complaints, or of gout ; it may also arise from inflammation of neighbouring parts.

177. Where, from any of the above causes, the stomach is subjected to an attack of common or phlegmonous inflammation, it may be distinguished, according to the accurate description of Dr. HOOPER, " by a violent burning pain in the stomach, with great soreness, distension, and flatulency ; severe vomiting, especially after any thing is swallowed, whether it be liquid, or solid ; most distressing thirst, restlessness, anxiety, and a continual tossing of the body, with great debility, constant watching, and a frequent, hard, and contracted pulse. In some cases, a severe purging attends."*

178. The above symptoms, which point out the accession of acute inflammation of the stomach,

ought to be carefully borne in mind ; indicating a complaint, which in a healthy constitution exhibits very uniform characters. When, however, inflammation takes place from this organ having been long subjected to the influence of excessive stimulation, that action may be so modified by circumstances, as to have, in some cases, scarcely a single distinct symptom of common inflammation.

179. Should the attack of acute inflammation become aggravated, symptoms of irritation soon ensue ; there is great loss of strength, with faintings ; short and interrupted respiration ; cold clammy sweats, hiccup, coldness of the extremities, the pulse intermits, and the patient is soon cut off.

180. In a mild attack, early attended to, it may end in resolution, and the patient do well ; but this complaint rarely terminates favourably. Suppuration is commonly marked by the long continued symptoms being followed by remission of pain, while a sense of weight and anxiety still remain ; where abscess forms, cold shiverings ensue, with evening exacerbations of fever, followed by night sweats, and other hectic symptoms ; and these prove fatal, unless the pus is thrown up by vomiting, and the ulcer heals. The approach of gangrene may be dreaded by sudden cessation of pain succeeding to continued violence of distress, with rapid and failing pulse, and delirium.

181. Examined after death, the stomach exhibits the common effects of inflammation ; a considerable redness of the internal or villous coat is the most frequent appearance, sometimes combined with effusion of albuminous matter into the cavity. I have seen the external or peritoneal coat also, of a deep scarlet colour ; where the inflammation had been unusually severe. In a case of gastritis from swallowing muriatic acid, I found the whole of the stomach violently inflamed, astonishingly vascular, thickened and pulpy in its texture, and full

of stiff ropy mucus, similar to that previously vomited.*

182. The occasional rapidly fatal effects of inflammation of the stomach, especially when the consequence of febrile action settling itself in that organ, are such as to entitle it to be considered one of the most dangerous of all the local inflammations. Among many rare preparations in Dr. HOOPER's collection, are two specimens of particular interest. One of these is the section of a stomach, the coats of which are much thickened from a deposit of coagulable lymph. The patient was the subject of inflammatory fever; all at once the symptoms left him, upon the accession of acute gastritis, which in two days proved fatal. The other is the inverted stomach from a fine youth, who died on the fifth day of acute gastritis. The internal surface is copiously fringed with effused coagulable lymph, here and there loosely suspended from the rugæ. I have in my own possession the stomach of a child only two years old, who died from inflammation of the stomach, connected with hydrocephalus; the stomach is inverted, and the mucous membrane finely injected, demonstrates to great advantage the effused and white coagulable matter, hanging in fringes from every part of the injected surface. (332.)

183. Affections of stomach, which, although not inflammatory, are often at least equally painful, sometimes occur from various causes known to operate by inducing irritation. These complaints, attended with their characteristic, peculiar, and severe local pain, I have already observed (142.) may probably arise from spasm of the stomach; and the manner of their coming and going by paroxysms, as well as the sudden and complete relief often obtained from the administration of powerful antispasmodic medicines, are so many arguments in support of the opinion.

* Pract. Obs. Surg. and Morb. Anat. Case 76.

184. Some cases of this kind appear in fact highly alarming, during their continuance, and it has occasionally happened that the extreme violence of agony has so rapidly exhausted the vital powers, that the unfortunate sufferer has sunk into the arms of death, before any assistance could be obtained. (187.)

185. One of the most ordinary, and least serious causes of this complaint, is that state of stomach and bowels connected with habitual costiveness. Some persons are occasionally distressed in this way, for very many years; for when suffering more than usual, induced to refer to medicine, they are for a time relieved. I have attended to this complaint, at the early age of six years, and have met with it at all subsequent periods of life. In the young it is described as a severe fixed pain, always referred to the same spot, the pit of the stomach, which makes them cry with distress. In those who are older it is compared to the stomach being grasped tight in the hand, or fixed in a vice; with sense of weight, and faintness. In all cases it is connected with dyspepsia, the digestive powers being nearly, or entirely suspended, not only during the paroxysm, but during the continuance of any tendency to this disorder. (Case 19.)

186. This affection often seems to depend principally on deficient action of bowels; for when stools are procured, it appears that the little taken into the stomach is properly digested, and the residue tinged with healthy looking bile. Sometimes, however, this complaint is evidently connected with morbid secretions from the chylopoietic viscera; the bowels not being merely loaded, but filled with the most unhealthy matters. In both these states, the tongue will generally be either white, or furred; the pulse seldom much disturbed.

187. The occasionally rapid and alarming course of these painful affections of stomach, is well illustrated by an observation in the works of MORGAGNI,

of a corpulent woman, who from eating pickled onions, with bread made of the farina of chesnuts, was seized with pain in the stomach; which became so excruciating, that within three hours she fainted, and expired. The stomach, on examination, was found exceedingly distended, and somewhat inflamed.

188. A lady is also mentioned by MORGAGNI, who for twenty-four years was so constantly subject to vomiting, that whatever diet was taken returned every morning, and two hours after dinner; the matter rejected being whitish, thick, and glutinous. Whenever she repressed the vomiting, distress was the consequence, till the offending matter was thrown up. The efforts of straining were severe, but after them she became easy. These circumstances, as it appears to me, may be regarded as analogous to the abundant secretion of viscid mucus, thrown off from above the contracted part, in stricture of the *œsophagus*. After death, the stomach, examined, was found divided into two cavities, by a contraction near its middle; the villous coat being of a red colour, as from inflammation. The stomach was also, in another instance, found by MORGAGNI as it were divided into two, by a very complete central contraction; the gall bladder containing many calculi.

189. Affections of a painful character, and to a very severe degree, sometimes arise from that peculiar species of irritation excited by the presence of biliary calculi, or gall stones, as will presently be more particularly noticed. (211.) The most severe and terrible instances I have ever seen, however, were in gouty subjects. (Cases 20. and 21.) They have taken place while that disease was evidently flying about the constitution, and where there was reason to conclude the affection itself was the consequence of gout in the stomach; and this circumstance affords another argument, that the symptoms are the effect of spasm from muscular contraction

of that cavity ; particularly considering the similarity of structure along the whole line of the alimentary canal, and also that in one instance (39.) gouty action long kept up irritation and spasmodic stricture in the œsophagus.

190. Upon this point, however, Dr. HOOPER has in conversation acquainted me, that he does not conceive any spasmodic affections of stomach attributable to gout can ever be traced after death, as such ; for that the stomach in gouty habits is usually flatulent, and very relaxed ; and that although a person from retrocedent gout may be seized with violent and terrible pain, referred to the stomach, with vomiting of a coffee-ground-like matter, even proving suddenly fatal, almost as if killed by a cannon-shot, yet the stomach has been found uniformly relaxed, exhibiting only patches of increased capillary vascularity on its internal surface. This he has himself seen in several such cases, and upon mentioning the matter to the late Dr. BAILLIE, he observed, he believed it was so, and that he had seen much the same appearances, and those only. Dr. HOOPER additionally remarked, that the violence of the pain was not positively known to be seated in the stomach, although there was much reason to believe it to be so, for the semilunar ganglion might be its seat ; and that where muscular contraction without structural disease is found, it may be considered the natural, or at least the accidental state of the part, unconnected with any effect of disease.

191. Closely connected with the present subject, is a case related by Dr. PYE ; it is of importance, as demonstrating the occasional condition of the contents of the stomach and bowels, under gouty influence, and exhibiting the quick transit of irritation, flying rapidly from one part to another, till it reached the stomach ; which thus excited, rejected its acrimonious contents, which proved the cause of all that had happened. The patient was a me-

dical gentleman, severely attacked with gout in both feet, with extreme agony. In the height of his sufferings, the pains from his feet flew quick as lightning directly to the calves of his legs; remaining there not half a minute, and not abated the least in violence (though the feet were left entirely free), the pains ascended with the same velocity as before to both thighs, leaving the calves of the legs free. From the thighs, in less than a minute, and as quick as before, they arrived at the abdomen, and after giving the patient one most severe twitch in the bowels, they reached the stomach. Here the pains, and here the fit, ended, upon the patient's vomiting up a pint and a half of a green aqueous liquor, so extremely corrosive as to be compared to the strongest mineral acid. Immediately after (2 P. M.) he fell asleep, and waked at eight, free from pain; and in two days was able to walk about his business.* — From this case, a natural inquiry follows, Whence was this fluid derived? Eight months previous to the attack, the patient had, for eleven weeks, confined himself to a vegetable diet, and although he then returned to the use of animal food, the stomach might have retained a tendency to favour the generation of acid matter, by a conversion of its contents. Or, on the other hand, was this corrosive fluid the result of depraved secretion, from the liver? The former appears to me the most probable conjecture. Again, were the spasmodic pains in the muscular structure of the limbs, bowels, and stomach, the cause, or the effect, of the formation of this fluid? The manner in which the case is related rather implies the first idea, but experience induces me to think the second most probably the truth.

192. The case of a gentleman, a banker in the city I lately attended, affords a very curious and singular parallel to the above, in its most important

* Medical Observations and Enquiries, vol. i.

and peculiar features, although not exactly a case of gout; the clear conclusion on the patient's mind, in this instance was, that all the sufferings in his limbs, were owing to the peculiar state of the contents of the stomach.*

193. Paroxysms of most severe pain in the stomach occasionally present all the appearances of spasm, particularly the total want of power to retain either solids or fluids, while the yellow tinge of skin, and light colour of the stools, indicate a concomitant affection of liver. In these complaints, the bowels are often habitually confined, a circumstance which may in some degree explain the great declension, or total failure, of the power of digestion.

194. The exacerbation of pain in the stomach in this case, is most frequently said to feel as if the stomach were violently squeezed or pressed down to the back. A hot skin, foul tongue, and quick pulse, usually attend; and the state of stomach is such, that if the patient is able to retain a small quantity of food, the previous degree of pain is most commonly aggravated by it.

195. The import of these complaints will greatly depend on the existence of any internal disease. Where they arise merely from derangement of function, they are, if judiciously treated, pretty sure to end favourably; although, where there is reason to suppose they indicate disease in the liver, or elsewhere, the prospect becomes less favourable, and perfect recovery more doubtful; but judicious and vigilant attention to the course of the complaint, will often enable the practitioner, in these circumstances, to do much, by alleviating symptoms, in adding to the real comfort of the patient.

196. When the affection of liver takes the lead, assuming more or less decidedly the characters of

* Pract. Observ. on Diseases of Lower Bowels, &c. 3d Edit. Case 44.

acute inflammation, it will most commonly be distinguished by the usual symptoms of febrile action, with tension and pain in the hepatic region, often pungent, more frequently dull or obtuse, a pain near the top of the right shoulder, much uneasiness in lying on the left side; difficulty in breathing, dry cough, vomiting, and hiccup. Dr. HOOPER observes, that the matter vomited is often bilious, and that when the attack has continued some days, the skin becomes tinged of a deep yellow.

197. The continuance of the above symptoms, especially where the hepatic functions have been previously exposed to much disturbance by long residence in hot climates, will sometimes lead to the formation of abscess; which event may, through the medium of adhesion between the liver and the anterior parietes of the abdomen, produce a hard external swelling, followed by a sense of inward throbbing, occasional rigors, diminished pain, and central softening in the tumor, as in other cases of internal suppuration. Abscess in the liver has, in this way, occasionally evacuated its contents into the lungs, or into the bowels.*

198. In some of the cases just referred to, the origin and true characters of the external tumor were strongly and distinctly marked; and there was consequently no difficulty in deciding on the propriety of making an opening when fluid was felt sufficiently near the surface. But it sometimes happens, that these characters, though present, are less distinct, or even very faintly traced. Under these circumstances, the surgeon will require all his caution, and the aid of his best judgment, particularly if he is fond of operative surgery; that he

* Some very interesting examples, illustrative of the symptoms and appearances that attend inflammation, abscess, abscess pointing externally, and disease of liver from hydatids, may be found among the cases recorded in my Practical Observations in Surgery and Morbid Anatomy.

may avoid doing wrong, without omitting to do what is right.

199. I have in one instance had an opportunity of watching the progress, and witnessing the favourable result, of a case in which a tumor, presenting in the region of the liver, was very indistinctly marked. There was certainly the fluctuation of a fluid, and that not very deep; and there was certainly also a degree of surrounding induration, indicating adhesion, but no symptom whatever of constitutional disturbance; only a sense of uneasiness in the region of the liver. The presence of a fluid, however, being sufficiently distinct, an opening was made, when the tumor proved to be the result of a retention of bile in the gall bladder, which, from excessive distension, had inflamed, and become adherent to the anterior parietes of the abdomen. (Case 23.)

200. Here, then, we have a peculiar variety of tumor, now and then admitting, or requiring, the treatment proper in abscess of liver; although originating from a cause of a totally different nature. But the hazard incurred by meddling unseasonably with the one case, and with the other, bear no comparison. The making a premature opening in an abscess of liver, could in all probability incur no further inconvenience than a trifling loss of blood, and some increase of pain for a day or two; while the puncture of an obstructed gall bladder, and letting out its contents, previous to the establishment of adhesion to the external parietes, would cost the patient his life, by allowing the escape of bile into the cavity of the abdomen.

201. Upon this subject, some extremely valuable remarks are made, by the discerning M. PETIT, who relates several cases in which such tumors, supposed abscess of liver, have been opened. In one, two pints, in another, one pint, of bile flowed out; but the operation in both proved fatal. Subsequently called on, by a consultation of physicians,

to perform this operation, he divided the skin ; but feeling the tumor subsiding, the idea of its containing bile, which might at that moment be flowing off into the bowels, occurred ; and he directly brought the edges of the wound together. The other gentlemen, astonished, inquired why he had not laid the abscess open to the bottom, when he explained his view of the case. No sooner was the wound dressed, than a desire to go to stool was felt, and the patient passed a large quantity of green bile, and in a few days both the wound, and supposed abscess, were cured.

202. In another such case the tumor was opened, but remained fistulous. In one instance of well marked inflammatory action in the region of the liver, a similar tumor was submitted to M. PETIT for opening, but the skin suffused with bile, while the fæces were destitute of it, argued the propriety of delay, and, a diluent laxative and emollient system continued, the stools in a few days were again tinged, and shortly after no less than three pints of greenish bilious matter was discharged from the bowels during the night, the tumor nearly subsided, and no longer painful, soon disappeared with the other symptoms ; and the patient recovered.

203. In one case M. PETIT opposed the opening a tumor of this kind, although it was urged that bilious stools passed daily ; answering he had known that to happen where bile was retained in the gall bladder. In a few days the patient recovered his health and strength, but the tumor continued for years. It is curious, that for three years that he followed his business, the tumid gall bladder, sometimes sunk, and at others prominent as ever, gave no pain. When tense, he pressed it, and generally diminished its size, making the bile to flow off by the bowels. Often, during the night or in the day, the tumor evacuated itself spontaneously, and the first intimation then was a griping uneasiness

as of approaching stool, when he always discharged a large quantity of bile. If this happened during costiveness, he sometimes suffered very severe colic pains before the bile could make its way.

204. The pain which accompanies suppuration is of a throbbing kind, which pain is not attendant on tumors of the gall bladder. The shivering of suppuration is succeeded by heat, and that by a moist skin; the slighter shivering caused by retention of bile in the gall bladder, is not followed by perspiration. The tumid gall bladder always presents under the rectus muscle, that of abscess may occur at any part of the liver. The clearest diagnostic, however, appears to be the peculiar circle of induration which surrounds the basis of an abscess of liver pointing outwards, which surrounding hardness cannot be present in a tumor which is merely the result of over distension from fluid in a natural cavity.

205. A lady, in a most severe fit of hepatic colic (to which she was subject), complained of intense pain in the region of the gall bladder, where fluctuation had often before been felt. After some days' misery the pain subsided, which, from the preceding severity of the symptoms, was at first supposed to be the forerunner of death. By copious stools of bilious and purulent matter, she was relieved, and recovered. Seven years afterwards she died from a fever, when M. PETIT, with laudable zeal, examined the body, and found the liver, gall-bladder, arch of the colon, and apposed peritoneal surface, all adherent together for the extent of three inches. The gall-bladder so small, that a stone, big as a nutmeg, quite filled it. This stone adhered on all sides to the bladder.

206. In another lady, a fluctuating and painful tumor of the gall bladder, inflamed, suppurated, and burst outwardly, discharged pus and limpid matter, and after a time, bile only; leaving a fistulous opening, under which the patient's strength

sinking, she died. On examination, the gall-bladder was found adherent to the peritoneum at the opening.

207. When the existing tumor may appear to require an opening, which again may appear justifiable to make, provided the gall-bladder is adherent, the patient laid on the left side, and the limbs drawn up, if the tumor adheres, it cannot be moved by the examination, but if un-adherent, it may be positively determined, being moveable by the fingers from side to side.

208. A lady with retention of bile, had the tumor (supposed abscess) opened, and it remained fistulous some months, till anxious for its cure, she submitted to the examination and enlargement of the wound, when a large gall-stone, found at the bottom, was extracted.

209. A man, after cold and fever, fell into a gradual state of wasting, with little complaint, except a dry cough. Suddenly attacked with jaundice, M. LEAULE was consulted, who could feel no great hardness, and no tenderness, in the seat of the liver. The stools, clay coloured; he was directed diluents, aperients, and bitters, without relief. On the contrary, there appeared another hard round tumor situated above the first, and rising prominent on the surface of the abdomen. With this the patient grew rapidly worse, and soon died. On opening the body, a large tumor of the gall-bladder was found, the figure of a large cucumber, with its fore part adherent to the peritoneum covering the abdomen. The stomach and other parts below, were partially displaced by this mere distension of gall-bladder; which opened, discharged five pints and a-half of viscid liquor, and sixty calculi.

210. A case is also mentioned by GOOCH, in which from inflammation (apparently the result of accidental bruise) the gall-bladder became adherent to the external parts of the abdomen; through

which a fistulous passage forming, near seventy biliary calculi, small as peas, were discharged in the course of a twelvemonth.

211. Where dyspeptic complaints are the consequence of irritation, from biliary calculi, either in the gall-bladder or ducts, they not only become more important, but less manageable, as depending on causes less under medical control. The most agonizing pains, and extreme tenderness, at the pit of the stomach, with straining to vomit, a slow pulse, yellow tinge of skin, and cold sweats, are generally the distinguishing character of these disorders.

212. According to Dr. HEBERDEN, the symptoms of obstructed gall-ducts are loss of appetite, sense of fulness in the stomach, sickness, vomiting, languor, inactivity, sleepiness, and, if it continues, wasting of flesh. These are common to other disorders, but the most distinguishing signs of this malady are yellowness of the eyes, skin, and urine; and the want of this colour in the stools. Sometimes the complaint is not less certainly denoted before yellowness appears, by exquisite pain about the pit of the stomach; the pulse being unmoved.*

213. It most commonly happens that the above train of symptoms is induced by a small calculus, perhaps not larger than a pea, passing from the gall-bladder into the cystic duct, and thence into the intestines. During its passage through the gall-ducts, it excites irritation, spasm, pain, and inflammation; but commonly, by the continued pressure of secreted fluid from behind, aided perhaps by the incidental efforts of vomiting, the calculus is pushed forward, and at length falling into the bowel, the patient's sufferings are at once relieved, although liable to be renewed, should other calculi be left behind; which sometimes is the case.

* Med. Trans. vol. ii.

214. Unfortunately, however, biliary, like urinary calculi, are not always got rid of upon these comparatively easy or at least safe terms. It sometimes happens that the calculus, remaining in the gall-bladder, continues to increase in magnitude; until, too large to make its way by the gall-ducts, it excites irritation and inflammation in the gall-bladder, where ulceration occasionally effects what distension was unable to accomplish. This effort of nature generally commences by adhesion between the fundus of the gall-bladder and surface of the duodenum, lying against it. Ulceration through the centre of the adherent space next follows, establishing a communication between the two cavities, by which the calculus, however large, is commonly enabled at length to reach the bowel, preparatory to its final expulsion.

215. This particular effort of nature, provided the calculus is large, is always a perilous undertaking for the constitution; and it often proves too heavy a task to be accomplished. I have, in one such case attended a lady whose sufferings were of the most extreme description, where a large calculus had by ulceration made its way into the intestine, but which was too large to pass through the bowels, when it arrived there; and with the symptoms that usually attend complete obstruction of bowels, the case terminated fatally. (Case 25.)

216. A case very similar to the above, is related by Mr. THOMAS. A lady was attacked with pain above the left ilium, tense abdomen, incessant bilious vomiting, pulse small and quick, great anxiety, and cold sweats. These symptoms continuing four days, were preceded by several dark, copious, loose stools; and complicated with a large umbilical hernia. On the fifth day easier, she was soon seized with unavailing straining, and after many efforts expelled a large biliary calculus, followed by copious stools, and immediate relief. This calculus was oval, of a yellowish colour, 228

grains weight. Mr. THOMAS observes, the passage of small calculi is usually attended with much local pain, and general irritation. He conceives the absence of these symptoms, in such cases, may depend on the biliary ducts being in a passive and relaxed state, having in two instances found these ducts so relaxed, as to enable him to pass his finger from the duodenum into the gall-bladder, where the structure of the liver was sound, and gall stones had never been suspected to exist. Ten days after the expulsion of this calculus, the patient, never before subject to jaundice, had a bilious tinge on the skin, pain in the epigastric region, fæces nearly white, and urine loaded with bile. A few doses of magnesia and rhubarb, however, corrected this state, and the patient recovered.*

217. Two valuable cases of this kind are related by Mr. BRAYNE, of Banbury. In the first, a woman after much ill health, and repeated paroxysms of pain at stomach, became (*November 26, 1820,*) the subject of continued fever, with confined bowels, but no local pain. On the fourth day, she was seized with severe pain in the left iliac region, tender on pressure. This urgent pain in sixteen hours suddenly left her, and she passed a stool, with a large biliary calculus; but remained in a low, muttering, melancholy state, for some months. This yellowish calculus, of a specific gravity just exceeding that of water, weighed 162 grains. It exhibited, under a very skilful analysis, the characters peculiar to biliary concretions. Early in 1822, this lady had hydrothorax, but no return of biliary complaint; and died *March 4*. Fortunately, leave was obtained for examining the body. The gall-bladder, small and thickened, had contracted a strong adhesion, the size of a shilling, to the duodenum, close to the pylorus. There was no uncommon

* Med. Chir. Trans. vol. vi.

appearance of vascularity. On removing these parts, a communicating aperture, from the gall-bladder into the duodenum, admitting a crow-quill, was discovered in the centre of the adhesion. The biliary ducts in this case were of the natural size. It was, at first, concluded most probable, that the calculus had escaped by dilatation, as the easiest supposition; but the appearances on dissection demonstrated its passage to have been effected by adhesive and ulcerative inflammation. In the second case, Mr. BRAYNE was requested to visit a woman (*February 24, 1822.*) supposed to be dying, on the fifth day of obstructed bowels. She was lying on her back, knees raised, abdomen much inflated, frequent griping, extremities cold and moist, pulse scarcely perceptible. She had vomited almost incessantly. Purgatives and other proper means failed to relieve, till at length the passage through the bowels was gradually restored, she passed numerous purging stools, and was relieved. *March 11.* after two days' violent tenesmus, she voided part of a biliary calculus; and six days afterwards, another large portion apparently of the same concretion. The smaller weighed 159, the larger 176 grains. This patient *June 4*, only complained of dyspnœa, with troublesome cough and œdema of the extremities. In this patient, as in the former, there had been previous attacks of nocturnal pain at stomach, not attended with sickness, but inducing excessive perspirations. *March 1825*, this patient was still living.*

218. In the beautiful collection made by Dr. HOOPER, a biliary calculus, nearly resembling one already referred to (Case 25.) reached the duodenum in precisely the same manner, and was voided per anum; but the patient lingered only a month, and died exhausted.

* Med. Chir. Trans. vol. xii.

219. In the extensive Museum of Mr. HEAVISIDE is a biliary calculus weighing 160 grains; voided by a person about forty, after four months' almost constant pain. Also another calculus, weighing 90 grains, passed by a lady after a severe struggle, in which her life was despaired of; after which, however, she recovered, and enjoyed many years of good health. In the same invaluable collection, is a concretion voided per anum, of such magnitude, as to have often excited much discussion. It appears to have originally consisted of several portions. By repeated examinations and analyses, it has lost much of its weight and has been found to possess all the peculiar characters of biliary calculi. Its fracture, at various parts, exhibits a fine radiated crystalline texture. Its entire length near five inches; its greatest diameter one inch three quarters. Its present weight is 1320 grains.

220. The above facts illustrate so many instances, in which it is most probable that one and the same process, that of ulceration, was called in for the relief of sufferings from the irritation of a large biliary calculus. It has been seen, that even where the gall-stone escapes into the bowel, it is not always able to make its way through the intestines; and that even where it has made good its passage through that canal, the ulcerated part is so situated, that from its immediate proximity to the stomach, the functions of that organ are disturbed, and so much irritation kept up in the system, that the patient not unfrequently sinks.

221. Under these circumstances, nature, ever watchful to remove or to repair the effects of disease, is first observed actively engaged in providing an outlet for the expulsion of the calculus, and then as busily occupied in preventing the ill consequences of what has been done, by inducing a gradual contraction of the opening, which in one instance was found so nearly closed, as only to

admit a crow-quill. In confirmation of these remarks, I may add, that in a communication with which I was lately favoured by Mr. BRAYNE, that gentleman says, "Since the publication of my cases, I have seen two other gall-stones, each larger than either of mine. They occurred in the practice of others, and both patients are alive and well. It is curious to observe how little acute suffering there is in such cases, compared with those in which small calculi pass by the duct."

222. The inconveniences sustained in the digestive functions, by the unrestrained flow of bile from the gall bladder immediately through the pylorus into the stomach, must be considerable, exciting nausea, sickness, loss of appetite, and other bilious complaints. Neither is it to be expected that the powers of the constitution should be always able perfectly to close the preternatural opening, once made. We see large ulcerated openings from abscesses, become smaller, and sometimes remain fistulous; that is, they take on the characters of a regularly organized canal, possessing an inner membrane, and surrounding cellular structure. There appears no reason why the same thing should not follow, in an ulcerated opening between the gall-bladder and intestinal canal. Again, should the adherent space be small, and the relative position of the parts subject either of them to be occasionally drawn away; as I have frequently, under these circumstances, seen solid adhesions extend themselves, there seems no difficulty in concluding that adhesions, which are hollow or internally ulcerated, may be subjected to a similar influence; an influence which in the course of time must convert a comparatively broad and superficial adhesion with a central passage, into a narrow elongated tube, the organization of which will become more perfect, the longer it has existed.

233. In this way a very singular appearance,

noticed in the manuscript of the late Mr. WATSON may be explained. He states that "Dec. 26, 1789, Mr. MORELL opened the body of a woman, long subject to bilious complaints. The liver was in a diseased and putrid state. The gall-bladder contained many gall-stones. One lodged in the opening of the cystic duct, had ulcerated the inner membrane. A singular circumstance was noticed about the middle of its internal surface, where a small round hole, or orifice, admitted a common probe directly from the gall bladder into the stomach near the pylorus. From hence, probably, the bile had flowed into the stomach, producing some of her complaints. This preternatural passage was a distinct duct, running a full inch, and connecting the two cavities. The neck of the gall-bladder was strongly united to the stomach by inflammatory adhesion; where the duct passed there was no appearance of that kind, the two cavities being an inch distant from each other—that is to say, the whole length of the duct.—The preparation was promised to Dr. BAILLIE."

The appearances just described, are noticed in Dr. BAILLIE's work, and probably from the same preparation. He says, "I have once seen an immediate communication by a short canal, between the gall-bladder, and small end of the stomach. This *lusus naturæ* is very rare, and but few instances of it have been recorded." *

224. The preceding remarks principally regard the escape of calculi from the gall bladder into the intestines, by means of the ulcerative process; it has, however, now and then happened, although probably but very rarely, that very large gall-stones have reached the intestinal canal, by passing through the dilated biliary ducts. Dr. HEBERDEN says, that in the gall-duct of one woman whom he had

* Morbid Anatomy, 2d Edition.

attended, there was found after death a gall-stone as big as a small hen's egg.*

225. A dyspeptic state of stomach may be induced, by the progressive increase of disease in its immediate vicinity. I have seen one instance in which it is probable the inconvenience sustained by the stomach was principally of a mechanical nature. The disease, a schirrous affection of omentum, passed round the coats of the stomach, necessarily producing confinement, and permanent contraction; towards the last scarcely admitting the passage of contents; a state highly unfavourable to the performance of its proper functions. (Case 26.)

226. The influence of affections of spleen, upon the functions of the stomach, I have not had many opportunities of observing. There is, however, reason to believe complaints in that viscus rarely excite any very early sympathetic disturbance of stomach. I have seen several instances of what, from the local feelings, and constitutional symptoms, may be considered inflammatory affections of that viscus; yet they were, at the same time, cases of tumid spleen; as if inflammatory action had supervened upon chronic enlargement.

227. One instance of inflammatory affection of spleen, of which I have preserved notes, occurred in a recruit in the 82d Regiment, who complained (*January 1, 1809,*) apparently in consequence of cold weather and a deep snow. He had some degree of pain in the left chest, no appetite, and a small pulse at 100. For this he was ordered medicine. The next day he was better. On the third not so well, he was taken into hospital, and in the evening lost eight ounces of blood; salines and aperients being continued. On the 4th, oppression and pain in breathing much relieved, but still quick pulse, and white tongue. The pain had

* Med. Trans. vol. ii.

shifted down to the margin of the lower left ribs. Salines and a blister were directed. On the 5th, the pulse was very quick, weak, and small, with diarrhœa. A bolus of camphor with opium was given. On the 6th, pulse at the wrist not perceptible. To check the looseness, opiates, at short intervals, were directed. At noon diarrhœa relieved, pulse restored but soft, with parched, black tongue, and delirium. On the 7th, lethargic; he died at ten A.M.

228. On examination, some slight adhesions were found in the left chest. In the abdomen, the spleen, enlarged to four times its natural size, was most firmly adherent to all the parts around. Its external surface exhibited the appearance of minute specks of albuminous matter, deposited between the laminæ of its peritoneal covering. The adhesion was most firm towards the diaphragm, where the little spots were most numerous. Neither was this appearance peculiar to the peritoneum covering the spleen, as similar spots were visible on the peritoneum lining the diaphragm. The structure of the spleen appeared gorged with blood, but otherwise healthy. A round worm, eight inches long, passed by the rectum, four days before death, led to the bowels being carefully examined, and a considerable, relaxed, intus-susception was found, in the lower part of the jejunum; within the intestine, a little below, lay another worm, similar to the one voided. It lay involved in a quantity of stiff, ropy mucilage, tenacious as bird-lime, tinged with bile of a clear orange colour. The worm was doubled in its middle, both extremities pointing towards the lower part of the bowels. The stomach was more vascular than natural, particularly at that part of its surface next the spleen, having the aspect of acute inflammation. The internal surface, also, of this part of the stomach, appeared as if the capillary vessels had allowed their contents to transude, giving an unequal stain to the fine villi.

229. Another well marked case of inflammatory affection of spleen, I lately attended in a female aged 29, fifteen years subject to attacks of pain in the left side; always in the same part. These attacks for some years were transitory, and always attended with confined or disordered bowels. While the pain continued she loosened her clothes, and lay down on the left side or back; her stomach scarcely allowing her to take any thing in the way of food.

230. After some years, these attacks came more suddenly, the accession of pain inducing sickness, and vomiting of thick bilious matter. The side being very tender, and the severe pain exciting fever. Preceding the attack, the bowels at this period were always costive; but at its onset she had generally two or three stools; after which she threw up every thing she attempted to swallow, till the attack subsided. In *March* 1825, an attack commenced, with a small pulse at 90, much pain, not aggravated by breathing, and yet preventing easy motion, and tenderness in the side, inability to lay on either side, with a tumor sufficiently evident when the relaxed abdomen was examined, in the horizontal posture. The pain in the tumid spleen was much aggravated by the least pressure. At the onset, the pain was so acute, she could not remain five minutes in one position, for the space of two hours; after this sickness coming on, in extreme pain at the loins, she threw up a cupful of thick bilious matter, and then felt relieved.

231. The bowels first cleared, saline medicines were directed, with some benefit. A blister to the side however, was more essentially useful, and though she became low and weak, the pulse quickening to 120, it was kept open for a few days, and entirely removed the complaint. Tumor was still distinguishable, in the recumbent position; rather tender, but not painful. The patient uniformly lost all appetite during the attack, and for a week

after it; always feeling better when the bowels were open; and during the pain never finding relief, until by medicine they were cleared. The tongue, at the onset of the attack foul and brown, was now clean, with slight tendency to a white colour.

232. *March 22, 1825.* At the kind desire of Dr. JAMES, I opened the body of a middle aged man, who, with dyspeptic and pectoral complaints, indicating deficient tone of constitution, came into the St. George's Infirmary, and in a few days, died. On examination, I found the spleen firmly adherent to the diaphragm, from preceding inflammation; enlarged to double its natural size; condensed in structure; and exhibiting cartilaginous specks within its peritoneal covering. The stomach and whole line of the intestinal tube, indicated habitual debility; being pulpy, soft, and thickened. The poor man, although he had occasionally suffered much from pain in the seat of the spleen, appeared to have died from affection of the heart, with hydrothorax.

233. It may perhaps be worthy of remark, that all the cases that have fallen under my observation of inflammatory affection of spleen, have occurred in persons known to be labouring under the influence of the depressing passions.

234. An instructive case of dyspeptic disorder, with disease of spleen presumably originating in a tumid and inflammatory state of that viscus, as above described, is related by Dr. DRAKE. A dyspeptic middle-aged lady, after eating heartily of roast pig, was seized (*Oct. 29,*) with violent sickness, vomiting, and lancinating pains under the left ribs. The bilious acid vomiting, excruciating pain, and fever, were relieved by cathartic and other medicines, clearing the costive bowels, and bringing away a prodigious quantity of black knotty hardened fœces. The symptoms soon returned, notwithstanding constant attention to the

bowels ; with mercurials, tonics, bitters, and antacids, in diet and medicine. Opiates failed to alleviate the extreme irritability of stomach ; when decided purgatives relieved. These were required every few days, and if delayed, flatulence, sickness, vomiting, and extreme pain urged their necessity. With declining appetite, increasing sickness, emaciation, fever, and want of power to repose on the left side, the complaint proceeded. The alkaline mephitic water, sarsaparilla, with lime water, were directed in vain ; the vomiting, and severe pain, becoming almost incessant.—The mercurial influence was next tried, and failed. During the following *March*, she felt rather relieved. Stomach less irritable ; for some days did not feel the pain in the side. The pain however soon returned, violent as ever, and a seton now failed to relieve her. In *April*, a tumor suddenly formed at the stomach, reaching from the ensiform cartilage to the umbilicus ; in which fluctuation was felt. This was poulticed for a week, when its pressure so distressed the stomach, that not a tea-spoonful of any thing was retained even for a minute. To relieve the extreme anxiety and oppression, a trocar was introduced, and two pints of a thin brown fluid evacuated. After this the stomach became retentive, and the evening passed nearly free from pain. Symptoms of extreme exhaustion supervened ; and within three days, she died.—On examination, the coats of the stomach were much thickened, and its cavity reduced to one third its usual size. Within the pyloric orifice was found a quantity of coagulable lymph, adhering to the inner coat, without a trace of recent inflammation. The omentum was excessively thin, completely diseased, and covered with effused lymph.—The spleen was one mass of disease ; half its bulk absorbed or wasted ; the organization of the remaining part completely obliterated, or partially dissolved. The peritoneal covering of its internal or concave sur-

face, was dilated into a very large cyst, with enormous blood vessels ramifying upon its surface. The upper part of the cyst was adherent to the whole under surface of the stomach; and the lower part of the upper edge of the transverse arch of the colon. This cyst contained more than a pound and a half of dark coagulated blood, several large portions of which floated in above a pint of brown coloured serum. The capacity of the cyst was capable of containing four or five pints. The bottom and sides of this bag were covered for an inch in thickness, with a black tenacious matter, like honey, interspersed with masses of lymph, similar to that upon the omentum. There was no foetor, nor the least appearance of purulent action, in any part of the cyst.*

235. The stomach is occasionally subject to disorders or disease originating within itself; some of these induce little inconvenience, others are attended with an entire suspension of its healthy functions, and not a few are the means of exciting severe distress, and great pain.

236. One variety of disease happily of exceedingly rare occurrence, is polypus of the stomach. The existence of this complaint it is not possible to determine accurately during life; although the probability of it may be suspected, by complaints of frequent pain and sickness, at stomach, with an obstinate irritable state of bowels, and diarrhœa. A case is related by Dr. G. BRESCHET, of a woman aged 69, subject to diarrhœa, attacked at intervals with vomiting of mucous matter, tenderness in the region of the stomach, and frequent stools; which complaints took on the characters of low irritable fever, and in a few weeks she died. On examination, the mucous membrane of the small intestines was found covered with ulcerations. The stomach appeared less than usual, and was con-

* Edinb. Med. and Surg. Journal, vol. ii.

tracted in the middle. Its cavity presented a tumor six inches long, and one and a half in diameter, attached to its lesser curvature. This tumor extended towards the pylorus, by which it passed into the duodenum. It was covered externally by the mucous membrane of the stomach. Its surface vascular, its colour violet, or brown; its texture dense, and resembling that of uterine polypi. There was a second tumor similar to the first, but smaller; the mucous membrane being throughout pale, and rugous.*

237. In another instance that fell under the observation of Dr. MONRO, a lady complained of pain in the stomach, dyspepsia, flatulence, and occasional diarrhœa; losing her colour, flesh, and strength. On pressing the abdomen externally, a tumor was felt to the right of the navel, the size of an orange, supposed to be situated in the colon. Medicines affording no relief, her complaints continued to increase, till her death. On examining the body, the stomach was found to have fallen as low as the navel. On opening it, a fleshy tumor was discovered, attached by a neck to its internal coat. The surface of the tumor was smooth, and its body so firm, solid, and tough, that it was cut through with difficulty.†

238. A very rare morbid appearance of stomach, bearing perhaps some affinity with the above, is also mentioned by Dr. MONRO, as having occurred in a gentleman after vomiting some coagulated blood. Occasional uneasiness, sickness, and distension of stomach succeeded. The excitement of the mercurial influence only left a troublesome diarrhœa. The functions of the stomach continued to decline, and the diarrhœa to return; till about twenty months after the accident, greatly emaciated, he died. On dissection, the stomach externally felt thickened. On laying it open, a large roundish

* Bulletin de la Facult. de Med. † Morbid Anatomy.

tumor was found projecting above the general surface of the villous coat. This tumor of fibrous structure, resembled in consistence the substance of the brain. The disease, the basis of which was four inches in diameter, was attached to the left side of the greater curvature of the stomach, and had three or four ulcers upon its internal surface.*

239. The stomach, in common with other parts of the alimentary canal, is occasionally subject to ulceration. This appearance is, I believe, most commonly found in connection either with tumor, thickening, or other disease of a malignant nature. In some cases, however, it occurs without indicating any malignant tendency; in some instances attending a similar affection of the bowels, in others appearing to stand alone.

240. In a recent instance where I had the opportunity of injecting the viscera, in a case of ulcerated bowels, several small ulcers were detected just within the pylorus, which, unless the part had been injected, must have escaped observation, as the change had only affected the villous surface, and that only to the extent of an eighth of an inch.

241. In two instances, however, I have seen the recent appearance of an ulceration in the stomach, apparently peculiar. It presents a number of minute ulcers destroying the villous and muscular coats, unconnected with redness thickening or any sign of inflammatory excitement.

242. In 1803, I noted an examination made with Dr. JAMES, of the body of a male infant, five months old; only for a week subject to fits of pain, with mucous and slimy laxity of bowels. No sickness at stomach, but said to have ate bread and milk greedily to the last. On opening the body, the intestines were healthy; on the surface of the stomach were numerous small dark spots, which on opening the cavity were found to depend on so

many small ulcers, no larger than grains of millet seed ; these destroying the villous and muscular coats, had left the peritoneal covering thin and transparent. There was not the least trace of redness, or induration around the ulcers, the stomach appearing otherwise healthy.

243. The other instance occurred in a grown person. In 1814, I examined with Dr. MERRIMAN the body of E. N., a young woman who died in advanced pregnancy, without any known cause. The only remarkable appearance was in the stomach, in which was much flatus, and some fluid contents. On its external surface, near a dozen small dark coloured spots appeared. These spots, raised above the surface, subsided readily when touched, as if the coats of the stomach were weakened. On opening the cavity, the villous membrane, like the peritoneal covering, was in a natural state, except in the small spots ; the largest near the lesser curvature of the stomach, rather less than a split pea in diameter. These small ulcerated spots destroying the villous and muscular coats, derived their colour partly from the transparency of the membrane, and partly from a sloughy tendency induced in the cellular tissue of the peritoneal covering. There was not the least trace of inflammation, or thickening in the coats of the stomach, the ulcers looking as if cut or scooped out of the healthy surface.

244. In the above, and in various other instances of small ulcerations taking place within the stomach, it does not appear that the nature of the complaint can be decided by any peculiarity in its symptoms. There is generally more or less tenderness upon external pressure, and frequently also an irritable state of the organ, with sickness and rejection of food ; but these symptoms are common to irritation from any other cause.

245. The stomach, together with the supe-

rior parts (52.), and inferior portions, of the alimentary canal, is occasionally subject to be affected by schirrus, and cancer.* This disease is one of those, the predisposing causes of which are unknown; although in some instances habits of intemperance in eating or drinking, and in others the long continued influence of the depressing passions, have appeared to bring it forward.

246. The most usual early symptoms of this disease are acidity at stomach, indigestion, oppression and weight, constant pain, nausea, and sometimes vomiting after eating. These are succeeded by loss of flesh, disturbed sleep, occasional spasmodic pains at the stomach, with rejection of viscid sour mucous fluid, and quick feeble pulse; and lastly, a hectic fever, great anxiety, with excruciating burning pain, aggravated by taking food, with vomiting of a dark brown fluid.

247. According to Dr. BAILLIE, cancer of the stomach is attended with a sense of pain in that organ, which varies a good deal in degree, in different individuals. What is swallowed is often rejected by vomiting, and there is frequently thrown up also a dark coloured fluid, which has sometimes been compared to coffee-grounds. The patient commonly becomes emaciated, and the countenance sallow; the pulse is frequent, and hectic symptoms are formed.

248. It has been observed (54.) that in schirrous disease of the œsophagus, pains shooting laterally to the ears, or down the arms, form a distinguishing character; and the same remark occasionally applies to similar affections of stomach. A case is related by Dr. HOLMES, of very severe dyspeptic symptoms, and peculiar uneasiness at stomach, which absorbents and alkalis failed to remove. In many months the symptoms increased, and the

* See a description of this disease in the Rectum, in Pract. Obs. on Diseases of the Lower Bowels, &c. page 14.

patient now rejected almost every kind of aliment, with distressing pain at stomach, and loss of flesh. A large blister gave some relief. The aperient least offensive to the stomach, was castor oil. As the disease proceeded, with increasing emaciation and debility, the pain became excruciating; occasionally with dysenteric diarrhœa. The pain sometimes extended round the abdomen, and even down the arms. On laying the hand over the epigastric region, where the pain was most severe, during the latter months of his complaint, a gurgling noise was sometimes perceived, as of a fluid forcibly driven through a narrow aperture, in that part of the abdomen beneath the hand. Having requested his body might be opened after death, the examination was made; and the coats of the greatest part of the lower half of the stomach were found prodigiously thickened, and entirely schirrous. That part of the pylorus continuous with the lesser curvature of the stomach was completely schirrous; and although the opposite side of the pylorus was less affected, the opening through it into the intestine was much diminished. The superior parts of the stomach were healthy. On examining the intestines, a stricture was found in the middle of the transverse arch of the colon, where it passes across the epigastric region; and the seat of this contraction was therefore so precisely in the vicinity of the pylorus, that whether the pain latterly so severe in the epigastric region, originated in the colon, or stomach, it must have been constantly referred to the same spot. The stricture in the colon formed a rigid contraction scarcely admitting the little finger, the coat of the intestine at that part being much thickened.*

249. It is remarked by Dr. MONRO†, that schirrous pylorus may frequently be perceived, by examination externally; especially when, as some-

* Edinburgh Medical Journal, vol. viii.

† On Diseases of the Gullet, &c.

times happens, it has descended lower than natural. This observation I have had no opportunity of verifying, although its accuracy is undoubted. I have however found a scirrhus disease in the seat of the stomach, present an external tumor (Case 26.), and shall notice several other instances where in cancerous disease of stomach, a distinct tumor within the abdomen might be felt during life. Indeed the tendency to produce an obvious degree of external tumor, appears to be a frequent although by no means a constant distinguishing character in cancerous affections. In a case of fungus hæmatodes, or soft cancer of the bladder, a very rare disease, a decided tumor was felt externally projecting from within the cavity of the pelvis.*

250. An interesting detail, in which disease was complicated with external tumor, is given by Mr. JAMIESON, who was consulted in *February* by a middle-aged man, for pains about the heart, stomach, chest, and shoulders; with great difficulty in swallowing, and frequent inclination to vomit. Six years before, a sudden grief had induced frequent palpitation at the heart, and the other complaints followed.

251. He was bled repeatedly, and took medicine with some relief; when, in a week or two, he mentioned a hard swelling at the pit of the stomach, just perceived. To this a poultice was directed to be applied. In *March*, he was attacked with vomitings, which neither stomachics nor opiates would restrain, being rejected as soon as taken. His thirst became excessive, and, with hiccup, so continued, till his death. Through the course of his disease his pulse was low and languid; and his pains, always worse at night, latterly deprived him of sleep. For a whole month unable to lie down, he in that state languished till *April*, when he died.

* Pract. Obs. on Dis. of Urine, and Urinary Org. Case 36.

252. On examination, an extensive steatomatous or rather "schirrous" disease, appearing to originate in the posterior mediastinum, filled a great part of the thorax, accompanying the œsophagus through the diaphragm, compressing the canal, while it enlarged the opening through which it passed. It extended in the abdomen along the lesser curvature of the stomach to the pylorus, which as well as the cardiac orifice was constricted, so that the finger could scarcely be pushed through either. Cutting into the substance of this disease, it was so hard that the knife would scarcely divide it. Its structure was not entirely solid, sinuses containing fluid having formed in the firm white substance.*

253. Another instance of extensive cancerous disease of stomach, with very unusual symptoms and external tumor, is given by Dr. TAYLOR, of a middle-aged person, who many months had pain at the stomach, and loss of appetite, which medicine could not relieve. In *November* he complained of decline of flesh and strength, with much difficulty in getting solid food into the stomach, at the orifice of which he was sensible of an obstruction. Frequently the descending bolus was squeezed violently into the fauces from this part, while sometimes, though seldom, it would pass without impediment into the stomach, whence he commonly was soon obliged to spout up his victuals, with much phlegm. He had least trouble in retaining thin food, or liquids, provided he swallowed them slowly. He complained much of a constant girding across the lower part of the epigastric region; but without external pain or tumor.

254. A variety of nervous and aperient medicines were directed in vain, as the complaint still increased. In *December*, inflammation of both kidneys, with suppression of urine, kept him in misery five days, till relieved by a stone passing

* Edin. Med. Essays, vol. ii.

down from the right kidney. This shock left him weak, with aggravation to his former complaints. In *March*, while walking out, he brought up two polypose substances in the same way as his food, the most firm of them being much putrified at its extremities; in shape they resembled the pistachio nut, but were rather longer. A sharp pain, in the chest followed the expulsion of these substances. A fortnight after, he brought up a third substance like the two former, but without pain, then or after. His night-sweats, which had come on and continued several weeks, now left him. Medicine was now laid aside, and a nutritious diet with milk recommended. In *May* he became sensible of an induration in the left side; soon after this, colliquative diarrhœa came on, and he died about the middle of *June*.

255. On examination, the omentum was indurated, schirrous, and extensively adherent to the peritoneum; and also in several parts to the intestines, liver, and spleen. The cutting away the diseased omentum exposed many little abscesses, within its substance. The surface of the liver, spleen, and stomach, had small white tubercles scattered over them, except which, the stomach appeared tolerably healthy; only its lesser curvature was firmly adherent to the diaphragm, by means of a schirrous mass resembling that of the omentum. The kidneys and bladder contained no stone.

256. In the chest the left lungs were adherent to the diaphragm. On separating the adhesions, an abscess was discovered, containing some pus, and some viscid brown fluid, exactly resembling that afterwards found in the stomach. The ulcerated cavity in the lungs was not extensive; but from that the abscess penetrated through the diaphragm, and coats of the stomach, into its cavity, by an opening admitting the finger. The œsophagus was sound till within two inches of the diaphragm, where it was converted into a white, thickened,

schirrous substance, full of little suppurations, opening into the canal. The cardiac orifice, and substance of the stomach for some distance below, were in much the same state.*

257. A case occurred to Mr. A. BURNS, in which a tumor, obvious to the feel during life, and attended with pulsation as an aneurism, arose from a disease of stomach and colon; which, with the omentum, were all united by adhesion, with thickening and induration, into a mass the size of a large orange. Near the pylorus was a large ulcerated opening, by which the stomach communicated with the colon, the edges of which ulcer were thickened and indurated.

258. The distinctions between the above disease, and schirrous pylorus, are in a pathological view highly interesting. In the former case no vomiting, in the latter vomiting, is one of the most constant symptoms. It is probable little or nothing passed by the pylorus, as the contents of the stomach, would find so much more ready a passage by the ulcerated opening, into the great intestine. The effect was the extreme debility of inanition; for, as Mr. BURNS observes, little nutrient matter could be absorbed from the lower part of the colon and rectum. Shewing also how extensively the stomach may be disorganized without vomiting, it leaves us to doubt if that action in schirrous pylorus be any thing more than the mere effect of obstruction to the passage of the food by the natural course.

259. A cancerous ulceration very similar to the above is exemplified in a specimen in Dr. HOOPER's excellent collection; in which the adherent colon ulcerated into the upper part of the jejunum, subjecting the unhappy patient to the vomiting of large quantities of purulent matter, for more than two

* Edinb. Med. Essays, vol. ii.

months before he was released ; though occasionally there was some action of the bowels.

260. The characters peculiar to schirrous disease are very rarely developed in early life, but the following instance affords a proof that this sometimes happens. A young man, mentioned by Mr. PAXTON, was three years affected with pain and irritability of stomach. Solid food sat uneasily, and excited violent retching, with rejection of viscid mucus, and watery fluid. During the last year, his complaints were of tension in the seat of the stomach ; and great pain, with frequent vomiting, till two or three quarts of chocolate-coloured fluid were ejected. Much reduced in strength and flesh, in his last attack he complained of intense pain at the stomach, and extreme sickness, to assist which he took warm water, and repeated emetics, but all failed to excite vomiting. Pain and tension increased, till the next morning, when he expired.

261. The abdomen contained several quarts of a dark coloured fluid ; the peritoneum and viscera having the appearance of a recent inflammation. Towards the lesser curvature near the cardia, the stomach, mortified, had given way, and thence must have issued the fluid contained in the abdomen. Near the pylorus it was preternaturally firm, and set round with several whitish tumors, large as hazel-nuts. A section of the pyloric orifice demonstrated this outlet to be thickened, unyielding, and contracted to the size of a quill.*

262. Where a schirrous affection proceeds to ulceration within the stomach, it becomes cancerous disease ; placing the patient's safety in continual peril. The ulcerated surface may soon be rendered a deep cavity, and by the destruction of the coats of the stomach, allow the escape of its contents into the abdomen, inducing a sudden and fatal attack of peritoneal inflammation. In Mr.

* Edinb. Med. Journal, vol. xv.

HEAVISIDE's Museum, a preparation exhibits several such ulcers within the stomach, one of which destroyed suddenly by penetrating its coats, and thereby effusing its contents into the cavity of the abdomen. It often happens, that in disease of this kind, the frequent efforts to vomit become suddenly unavailing, from the weak part at the bottom of the ulcer having at length given way, while the pain, tension, and other symptoms, confirm suspicion, and should warn the practitioner of the rapid approach of death.

263. One of the dangers, which in this stage of the disease not unfrequently hastens the unfortunate event, is that of hæmorrhage. I have, in various instances, attended cases of hæmorrhage from the stomach; where the patients have thrown up so large a quantity of florid blood by vomiting, as to demonstrate that some artery of consequence must have given way. But they were in young persons, and if the complaint was the effect of accidental rupture, the vessel has closed; if the consequence of preceding ulceration, it has healed; either in case, they have perfectly recovered.

264. In cancerous disease, however, the parts have no power to assist themselves, nor are they capable of receiving much assistance from art, beyond the mere palliation of symptoms. A preparation in the morbid anatomical collection of Dr. HOOPER, shews a portion of the stomach, indurated and ulcerated, from a person where bleedings repeatedly took place, and who died from this cause. In the same valuable selection, is also a part of the stomach and duodenum, where, just below the pylorus, in the intestine, an ulcerated and fungoid surface exists. The patient was the subject of *Melæna*, and in the habit of vomiting quantities of fluid, like the grounds of coffee; the black matter, when diluted with water, not mixing, but sinking. In the Museum of Mr. HEAVISIDE, a very illustrative preparation exhibits a cancerous ulceration of

the internal coat of the stomach, in which are seen two bristles in the orifices of two blood-vessels, which burst three days before death, and destroyed by their excessive bleeding. A lady, advanced in life, was not long since under my care, for a violent, continued, and at length fatal bleeding from the stomach; which there was every reason to believe a state of disease very similar to that now under consideration. (Case 27.) In this instance I had an opportunity of seeing a coagulum of blood, of unusual magnitude, thrown up by the œsophagus, presenting a complete cast of the cavity of the stomach.

265. Nearly resembling the above, were the complaints of an elderly man, mentioned by Dr. MONRO, many years subject to derangement of stomach; who at last suffered in the course of one night six successive fainting fits, followed by vomiting of blood, and then suddenly expired. On examination, several coagula, and about two pints of fluid blood, were found in the stomach; the bleeding vessels could not be discerned, but an extensive cancerous ulcer occupied the whole of the left portion of that cavity.

266. It has never occurred to me to find the veins in the stomach varicose; such a case, however, has been seen by Dr. MONRO. The veins of a part of the villous coat of the stomach had attained a very unnatural size, and one of these giving way, a large quantity of blood was lost. (268.)

267. Neither does the vomiting of blood prove that the stomach is the part losing it. Sometimes, through the medium of adhesion and ulceration, that cavity receives the blood effused from the seat of primary disease, in some neighbouring viscus. In this way, large quantities of blood have sometimes been rejected by the stomach, derived from disease in the liver. In the valuable and improving pathological collection in the Military Hospital at Chatham, a foundation that reflects infinite credit

upon the activity and zeal of the present Director-General of the Army Medical Board, Sir JAMES M'GRIGOR, is an interesting specimen of disease, from a man who was in hospital a few days, with constant vomiting and purging of blood. Upon his death, the stomach was found filled with a large quantity of pure blood. The stomach, adherent to the spleen, had become connected by ulceration with its cavity, the vessels within the spleen having furnished the hæmorrhage.

268. In the Museum of the Royal College of Surgeons, there is a portion of the stomach from a person who died of hæmorrhage, in consequence of the rupture of a vein in the stomach. The enlarged and varicose vein is injected; and the superficial ulcer of the inner membrane of the stomach has laid open the vein in two places.

269. It occasionally happens, that without ulceration or rupture of vessels, a quantity of blood is discharged by vomiting. The hæmorrhage may be the consequence of extreme weakness of the capillary vessels upon the internal coat of the stomach; a debility so extreme, that instead of separating the fluid which it is their office to secrete into the cavity of the stomach, the exhalent arteries permit the blood to pass unaltered; and as these vessels are extremely numerous, should the extent of surface so affected be considerable, a large quantity of blood may be very soon lost, and that which was the effect of weakness may thus become a cause of additional exhaustion.

270. The repeated rejection of a quantity of dark coloured fluid by vomiting, sometimes resembling coffee-grounds, consisting either of pure blood, or of that fluid mingled with bile and mucus, has been distinguished by most nosological writers under the term *Hæmatemesis*; and, when such appearances have occurred in the stools, the disease has been denominated *Melæna*. Considerable facilities in attending to these complaints, affecting the inferior

parts of the alimentary canal, have I hope enabled me to give a tolerably clear view of the subject, especially as through the kindness of friends I have been favoured with various opportunities for elucidating the exact morbid anatomy of the disease. To these practical illustrations, recently laid before the public, I shall therefore beg leave to refer, for a more full account than it appears necessary to give upon the present occasion.*

271. In many of the malignant fevers of tropical climates, it is not unusual to find the capillary vessels of the stomach effuse their blood into its cavity. The existence of the most extreme debility in the capillary arterial system in these cases, is manifested frequently by hæmorrhage from the nose, mouth, and anus, and even by a deposition of blood in the urine; as also by parts of the cavity of the stomach bearing the appearances of excessive inflammation, extensive ulceration, and not very unfrequently gangrene. In a patient who died of yellow fever in the garrison of Gibraltar, during the fatal summer of 1804, I had an opportunity, soon after my own recovery from that disease, of examining the appearances after death, where the black vomit had taken place. The stomach externally was inflamed, and internally had a strong tendency to run into mortification. Its colour internally, the recent appearances of which I preserved by making a drawing from it upon the spot, was the darkest purple, or chocolate colour, exactly similar to that of the fluid, which, in this instance, had been thrown up by vomiting; a circumstance that appeared to depend on blood effused from the capillary vessels, into the cellular texture of the villous coat. Appearances precisely similar to those described as frequently attending this complaint, in the excellent work of Dr. JOHNSON, on the diseases of tropical climates.

* Practical Observations on the Diseases of the Bowels, &c. 3d Edit. page 99.

272. Some of the preceding remarks (246.) have had for their object the discrimination of those complaints which either already have, or probably soon may, assume the characters of schirrus, and lead on eventually to cancerous disease. Happily these are among the comparatively rare forms of disease; but it is nevertheless highly important to be well acquainted with the circumstances by which they may be distinguished, when present. It is most natural that families and friends should look anxiously to their medical attendants for information, upon points most nearly related to their happiness and future comforts. But it is not always easy or practicable to form a clear opinion upon the exact seat or tendency of certain disorders, such is the occasional obscurity of symptoms. These considerations have induced me to mention several instances of disease, in which the stomach was rather secondarily than primarily concerned; and also more than one where the internal derangement produced tumor that could be felt externally; a circumstance which, in the ambiguity of appearances in such cases, may occasionally assist in determining the probable nature of the disease.

273. One of the most powerful inducements to diligence in studying the various characters of disease, must be the reflection, that when we are once aware of having to contend with a disease which may, by heedlessness, be driven forward, but can frequently, by prudent attention, be soothed and lulled into comparative repose, we shall no longer be in danger of mistaking our object; but, seeing it clearly, shall not fail to keep in view that line of treatment which will generally confer much comfort and relief, even where it may not be possible to bring about a favourable event.

274. The stomach, as being the common receptacle of food, is occasionally liable to be injured or destroyed, by the taking of various deleterious substances, by accident or design. It was not the pur-

pose of the present remarks to include the effects of poisons upon the stomach ; but the object of this essay being practical utility, and having attended a child who unexpectedly recovered after drinking boiling water, I have been induced to mention the case with another where the event was unfavourable. (Cases 28 and 29.)

275. Several interesting cases, where the above accident occurred, have been related by Dr. M. HALL*, who considers the symptoms not those of inflammation of the œsophagus and stomach, but of the glottis and larynx ; and that probably the boiling water does not penetrate into the stomach, its progress being arrested by spasm. The dissection of one of the cases presented appearances supporting this opinion, but each of the instances now brought forward will, I think, warrant an opposite conclusion ; in the favourable case, it appears to me, the extreme tenderness at the epigastrium can only be explained by admitting that the fluid had reached the stomach ; and in the dissection of the fatal case, the inner membrane of that organ was, for some distance round the œsophagus, lined with effused lymph.

276. In another case also related, together with several instances of injury to the stomach, in a former work, where a young woman purposely drank boiling water, I had an opportunity of examining the stomach while recent, and found its inner surface gangrenous, and nearly black from violent inflammation.† It appears to me of the utmost importance to be correct upon this point, as our practice must be entirely regulated by what we believe to be the seat of the injury ; and although the larynx may, and perhaps in every case does suffer, as well as the œsophagus and stomach, I cannot but feel convinced the latter parts claim our

* Med. Chir. Trans. vol. xii.

† Practical Observations in Surgery and Morbid Anatomy.

first regard, as being, in probability, the principal seat of injury.

ON THE TREATMENT.

277. That peculiar irritability of stomach which attends sea-sickness (146.), I have ventured to regard as a sympathetic affection, dependant on a disturbed state of brain. To those who may feel disposed to dissent from this opinion, it may be observed, that having at one period of my life been much at sea, generally surrounded by landsmen, and also frequently myself a severe sufferer, my conviction on this point is at all events grounded upon feeling, no less than observation.

278. In this complaint the first effect appears to be, as in many other parallel cases of irritation, an increased secretion of the various fluids either constantly or occasionally poured into the stomach; the salivary and mucous fluids from the mouth and fauces, those secreted by the internal surface of the stomach; and, connected with these again, the secretions from the liver, and pancreas. These circumstances, sometimes scarcely observable, are in other instances very manifest, sufficiently explaining the sense of fulness and load previously felt at the pit of the stomach, the quantity often rejected by vomiting where the stomach was supposed empty, and also the relief experienced by the evacuation of its contents.

279. This complaint is most commonly of so little real importance, as scarcely to require treatment. The stomach if loaded with food is spontaneously relieved by sickness; and where its contents are merely the secreted fluids, the efforts of retching equally effective, are soon over, and the

patient becomes composed; provided he has a place to lie down in, and remain at rest.

280. The greatest comfort in this case is quietude and repose; these circumstances being most favourable to the relief of the peculiar and sickening sense of disturbance and confusion experienced within the head, from which the whole of the distress originates. Where the stomach is disposed to sickness, it is best to yield to its suggestion; if it can be obtained in time, a draught of tepid water will render the efforts more easy, and not less effective in relief to the patient. After this, if he has the power of retiring quietly to his birth, he is a happy man. By subsequent care to take only the most simple and inoffensive food that can be obtained, and that in the smallest quantity at a time, with care to prevent confinement of bowels, the disorder commonly subsides in a few days.

281. Various means of relief have obtained credit under this affection of stomach. Taking wine will often succeed: spirits and water I have frequently known answer the same purpose, and have also seen it completely checked for the time by eating two or three fresh apples. It appears also, that any strong impression upon the mind, as exerting a powerful influence on the brain, is capable of at once arresting the progress of this complaint. On one occasion at sea, in heavy weather, I was myself extremely ill, sick, and lying down; a sudden noise and commotion upon deck drew my attention, when one of the officers running into the cabin, told me the hold of the ship was all in flames. The more powerful impression in an instant took the lead; I jumped up, and although almost by a miracle the fire was extinguished, and the ship and all the lives Providentially saved, I from that moment felt neither head-ach or sickness.

282. In troublesome and tedious cases, an occasional saline draught is one of the best medicines I know of, for tranquillizing the stomach; these

medicines, assisted by quiet, with careful attention to the bowels, will rarely fail to give relief. Now and then, however, the violence of straining, or long continuance of the disorder, is productive of excessive determination of blood to the head, especially in plethoric or gouty habits; in this case, should the stomach escape, the brain may suffer by the accidental rupture of some vessel within the head; requiring, of course, the prompt abstraction of blood, and the other means of depletion usual in oppressed brain under other circumstances. The stomach also appears to be occasionally liable to injury from this complaint, or at least it recovers with much difficulty. A gentleman, from the sickness incident to a voyage only of a few hours, incurred a state of permanent irritability of stomach, that for many months afterward rendered him incapable of retaining almost any kind of food, solid or liquid; and eventually proved fatal.

283. The sickness and vomiting induced by sympathy with the brain, in injury of the head from external violence, or in compression of the brain, by the accidental rupture of a blood-vessel in sanguineous apoplexy, will require no peculiar attention. The copious abstraction of blood, with the other measures conducive to the relief of the principal complaint, will be, at the same time, the means of relieving the affection of stomach. Where sickness and vomiting occur, in connection with that state of brain consequent to intemperance, a peculiar train of ills are induced, that will presently be considered. (324.)

284. Those complaints of stomach connected with a tendency to serous or purulent effusion upon the brain, where the only deficiency is want of appetite, without any evidence of bilious derangement, and where probably any defect in the activity of the bowels is explained by the deficient quantity of food taken, the attention must be exclusively directed to the treatment of the disorder within

the head, the affection of stomach being of secondary importance.

285. In many of those sympathetic affections of stomach, induced by derangement in the functions of the liver, the occasional attacks of dyspepsia, sickness or vomiting, frequently of bilious matter, appears to be the result of the disturbed state of the secretion of bile; the most evident fault in this secretion being excess in quantity. This circumstance may in some instances depend on an irritable state of liver, a conclusion deriving support from the patient's having, perhaps, experienced uneasy sensations about the shoulder, and in the seat of the liver, and especially by that viscus feeling tender to external pressure. In several instances however, I have known the colon lie so exactly between the liver and external parietes, that being itself diseased, and the precise seat of the disease obscured by several anomalous symptoms, it has been quite impossible to determine accurately during life, whether the liver was, or was not, sound.

286. Here again, regarding the disturbed state of the hepatic function as the principal complaint, the treatment must be directed accordingly. The most appropriate plan here will generally consist of small doses, occasionally repeated, of the blue pill, or the sub-muriate of mercury, alternated with infusions of the vegetable bitters; occasionally combined with the fixed alkalies, or magnesia; or united with some other aperient influence.

287. The effectual relief almost universally derived from the mercurial influence in affections of liver, is as extensively known, as it is little understood. Perhaps the resolution of an inflammatory, adherent, and prominent tumor of the liver, which has more than once taken place in patients under my care, by instituting mercurial frictions upon the part, in addition to the usual treatment for inflammation, may be explained on the same prin-

ciple by which assistance is derived in pneumonic inflammation, from the exhibition of ammoniacum and squills, that is, by exciting increased secretion from all parts of the internal structure of the inflamed viscus, and thus unloading its vessels, and consequently relieving tension.

288. In treating those complaints where dyspeptic and painful affections of stomach are connected with bilious disorder, especially when either biliary calculi, or a retention of bile, exist, some care and even much discernment will sometimes be required; this subject, however, already entered upon (196.), will be more fully adverted to in a future part of these observations. (341.)

289. In those disorders of stomach connected with affection of spleen, it is remarkable that in every case I have seen, there was an evident tendency to a peculiar sluggish and irregular state of bowels; this appears to be an important circumstance to bear in mind in the treatment of the complaint, as will presently be more fully demonstrated. (353.)

290. Where an irritable or dyspeptic state of stomach is induced by sympathy with affection of kidney, the characters of the sympathetic disturbance will be regulated by those of the original complaint. The following up this line of enquiry on the present occasion however, would lead to an unnecessary recapitulation of those complaints to which the kidneys are liable, a subject I have on a former occasion been at much pains to elucidate.*

291. As far as affection of stomach is concerned in these complaints, it seems to be purely sympathetic, so that when the feelings in the seat of the original disorder are by proper treatment soothed and quieted, the stomach becomes tranquil, and the digestive powers are exerted with activity; but

* Pract. Observat. on the Diseases of Urine, &c.

when, on the contrary, the pain about the loins, or in some part of the urinary organs, is aggravated, the stomach becomes suddenly unsteady and capricious, and will either not receive, or perhaps will receive but not retain, food. I have observed that pain either in the loins, or in some part of the urinary organs, may become aggravated, because I have repeatedly seen, and in the essay just referred to have described, a very serious affection of kidney, unattended with pain in the part, although productive of excessive and almost constant distress at the neck of the bladder; a peculiar sympathy, not before, I believe, adverted to.

292. The affection of stomach in these cases, can only be relieved, by attending to the original complaint; the treatment being regulated in conformity to the principles laid down in the essay upon those disorders.

293. Whenever dyspepsia arises from irritable or ulcerated bowels, the eye of attention and care must still be turned to the treatment of the original complaint, by which the generally unsteady state of the stomach will be most successfully relieved. Where the complaint in the bowels partakes of the nature of stricture, or disease in the coats of the intestines, the same careful attention must still be had in the treatment of the original cause of the disturbance of stomach. One of the essential circumstances to be attended to in these disorders, is the determining the most expedient mode and manner of regulating the action of the bowels, so as effectually to keep them clear, without exciting irritation in the seat of the complaint. This subject, however, essential as it is not only to the comfort, but recovery of the patient, has been rather fully entered upon elsewhere.*

294. The remote consequences, and it may be often said the immediate influence, of derangement

* Pract. Observat. on the Diseases of the Bowels, &c.

of the stomach itself, in exciting disturbance in the feelings, functions, and structure of other parts of the system, open so wide a field for research, as is not, I conceive, equalled in extent or importance, by any other department in the whole circle of pathological science.

295. The state of stomach described (155.) as merely productive of habitual absence of desire for food, a want of appetite, and that alone, as regards the immediate affection of stomach is very generally connected with a deficient or incomplete action of the bowels. This affection, apparently holding out no pressing or urgent symptom, is nevertheless very frequently the means of inducing a complaint in the head, which although many have remarked, "it is only a head-ach," I have with close attention watched and followed through all its stages of progress, to a fatal event. In many instances connected with evidence of extreme debility, and tendency to dropsical effusion, the treatment calculated to restore the constitution, has removed the complaint in the head. In less severe cases, every variation in diet or treatment has argued the certainty that the symptoms of distress, the giddiness and confusion in the head, are connected with, and most probably the consequence of, serous effusion upon the brain.

296. A weak watery diet, and neglect of the stomach and bowels, invariably aggravate the disease, the same effect to an extreme degree being the immediate consequence of blood-letting, general or local; while a careful and steady prosecution of an opposite system of treatment, may be regarded as invariably successful.

297. Under this state of constitution, that is, where a merely dyspeptic stomach, with torpid bowels, are connected with distressing or painful affection of head, pale skin, weakness and failure in the pulse and strength; the administration of medicines combining the tonic with the aperient

power, the former influence being progressively increased, the other gradually diminished, in careful adjustment to the still improving health, will but rarely fail to restore the patient to perfect health. Discrimination however is no less necessary on this, than upon many other occasions; for should the practitioner mistake the kind of case to which this plan is applicable, the same treatment which proves eminently successful in the one case, may at any moment induce fatal apoplexy in the other.

298. In hydrocephalus, regarded as a disorder of infancy and childhood (156.) the deranged state of the digestive organs forms a very prominent character. When the complaint appears to have originated from the irritation of teething, it is probable that not only are the functions of the stomach and bowels much disturbed, but those of the liver also; for while, from the diminished power of stomach, the undigested milk runs into the acetous fermentation, and excites pain, screaming, and convulsions; the greenish matters rejected by vomiting, manifest a very unhealthy state of bile, while the stools consist of little else than a tenacious deep green matter, or black pitchy slime.

299. Upon the testimony of these appearances the treatment is, or ought to be, regulated. The first object, after fairly and sufficiently lancing the gums, should be to clear the stomach and bowels, by proper medicines; the second, to keep them so, for the prevention of unhealthy accumulation. In consideration of the evident derangement in the hepatic functions, small doses of the milder mercurial preparations are generally selected, for this purpose.

300. Where the advanced progress of hydrocephalus has changed the relative position of the symptoms, the irritation from the state of the gums may have become less apparent, but the capricious and unsteady state of stomach, the sluggish condition of bowels, and the unhealthy secretions

poured into them, are equally evident; but here where loss of nervous power, and perhaps the altered figure of the head, indicate accumulation of fluid in the ventricles of the brain, the hope of exciting the action of the absorbents has induced every effort to bring on the mercurial excitement in the system; a condition by no means easy to establish. A child about three years old, was under the care of Mr. HEAVISIDE and myself, that having lost the use of his limbs, and nearly his senses, with dilated pupil, and the drowsy watchfulness characteristic of serous effusion, was directed mercury internally and externally for the space of two months; with a small blister kept open on the head, where, from the degree of expansion of the skull, it was presumed there was near a pint of water collected. He perfectly recovered at last, and is now (8 years afterwards) in very good health; although the cure was completed without any material excitement in the salivary system. In this case, the mercurial influence was proposed with a view to the direct excitement of absorption; it may reasonably be doubted whether its principal power might not have been exerted in correcting the deranged functions of the abdominal viscera, particularly those of the liver, inducing healthy secretions, and by this means relieving the determination to the head, and restoring the healthy condition of the circulating fluids.

301. Where a dyspeptic state of stomach is connected with habitual tendency to palpitation and irregular action of the heart (158.), I believe it will invariably be found also connected with irregularity in the functions of the bowels, most commonly a deficiency of action. It may perhaps be objected, that it is hardly probable that the deranged state of stomach and bowels should have induced the disturbed action of the heart, seeing that after medicines have been given to remove costiveness, or regulate action, the nervous feelings with-

in the chest have again returned. The force of this objection however is lost, by considering the question more closely; for it will be found that when the palpitations return, they do so only because the digestive organs are again relapsing into their former condition, and consequently that which at first had the appearance of an objection, may more properly be regarded as a direct proof in favour of the position.

302. As to the means best adapted to the correction of this state of viscera, these must be regulated entirely by prevailing symptoms. Where bilious derangement manifests itself, mercurial preparations in small doses, and at short intervals, will be indicated; keeping up at the same time moderate action of the bowels by mild aperients. Where the evacuations, obtained with difficulty, contain quantities of tenacious unhealthy slime, the habit evincing a tendency to scrofula, the medicines presently to be mentioned (319.) will be found extremely useful; but where neither of these dispositions exist, a carefully conducted course of light tonic and aperient medicines, steadily persevered in for several months, will be almost sure of removing the complaint, provided there has been no previous supervention of organic disease.

303. In fact, provided the above plan of treatment is so adjusted as to meet the circumstances of the case, the degree of its efficacy may be considered a tolerably fair criterion of the complaint being confined to functional derangement; or attended with change of structure, or organic disease. Where there is reason to believe the latter conclusion true, one or other of the lines of treatment already mentioned will generally afford at least temporary relief, aided by the occasional assistance of opiates, or other antispasmodic medicines.

304. The dyspeptic affection of stomach connected with asthma (159.), stands so near the cause,

if it be not the cause itself, that having for a young gentleman, in whom the predisposition to the disease was strongly marked, lately ordered a tonic and aperient plan of medicine, by combining the decoction and tincture of bark with the sulphate of magnesia; it succeeded in relieving the paroxysm more quickly, apparently by restoring the digestive powers more promptly, than upon any previous occasion, when other medicines had been employed.

305. All the numerous complaints connected with intemperance in drinking (171.) are certainly consequent to, and apparently derived from, a dyspeptic and irritable state of stomach. Where this dyspeptic state of stomach has been attended to, (provided the patient's bad habits have been resolutely and steadily laid aside), previous to the establishment of organic disease, I have always found the disorder yield; and am of opinion that it will almost invariably be found curable, by the plan of treatment presently to be laid down. (324.)

306. With regard to the influence of dyspeptic affections in favouring the production of calculous disease, (152.) it appears that the impaired power of digestion leaves the contents of the stomach partially at liberty to undergo those spontaneous changes, to which, under exposure to warmth and moisture, they are naturally prone. The principal results of this state, are in most cases the generation of acid matters in the alimentary canal; and the occasional absorption of substances into the circulation, which have not been reduced by complete assimilation, as well as the occasional transmission by the absorbent system from the stomach and bowels into the circulating blood, of imperfectly digested matters, are points that appear to be in various diseases clearly proved, particularly by the abundant, and even astonishingly large supplies of saccharine matter, separated by the kidneys, with the urine, in diabetic complaints.

307. It is not one of the least curious or least interesting circumstances attendant upon diabetes, that, while in its infancy, the inordinate craving for food may be repressed by the judicious use of bark, and other tonics; the excessive secretion of urine being also lessened, as the appetite sinks down to the healthy standard. The most remarkable fact however, as appears to me, is, that while the depraved state of stomach is such as to prevent the patient ever feeling satisfied, and while at the same time, the evidence of immense quantities of undigested matter passing off through the circulation by the kidneys is undeniable, the stools manifest no appearance whatever either of depraved secretion or of incomplete digestion, being only more frequent than in health, in proportion to the increased quantity of solid food taken.

308. The above circumstances I have seen; and when the patient, subsequently placed under other care, still continued to decline, and eventually died, requested to examine the body, I found the stomach in structure perfectly healthy, but in size and substance equal to the stomach of an adult, although in a young lady scarcely eleven years of age. The bowels also, were perfectly healthy, but like the stomach, larger than natural and flatulent. The kidneys, not manifesting the least apparent change from health, I carefully injected, in hopes of being able, by this means, to throw some little light upon this most obscure and formidable complaint, but was disappointed. One of these kidneys, its capillary arteries and veins, filled with fine red and black injection, is preserved in Mr. HEAVISIDE'S Museum; and only demonstrates that to appearance, the organization of the gland is perfectly sound.

309. It has been observed (155.), that one of the most common kinds of derangement of stomach appears to be a failure of energy, or diminished power of digestion, either leaving the patient with-

out desire for food, or inducing him to prefer those kinds of nutriment that are not of the most advisable description. Under this state of stomach, which is one of mere debility, the habitually slow action of the bowels must be always taken into the account, in determining the most appropriate treatment. It does not appear to me, that derangement in the hepatic functions is at all necessarily connected with this condition of stomach; although I have known many patients who had long been in the habit of occasionally taking mercurial pills for its removal, having been told the disorder was bilious. These medicines, by re-exciting a degree of activity in the bowels, have usually afforded temporary relief, but nothing more, forming one of the many instances in which the attention has been directed rather to the relief of an effect, than the removal of the cause, of a complaint.

310. It is one of the peculiarities of the present case, that its greatest importance does not centre in the organ primarily affected, but rather in the sympathetic affection of head, induced by its continuance. The serious consequences of this affection I have laid down (295.) from observation only; and as I know it may at any time induce serous apoplexy, it is most important that the particular complaint leading to it should be clearly distinguished.

311. In cases of this description, the first object is to clear the bowels; this may, perhaps, be most conveniently done by directing an infusion and tincture of senna, combined with a saline aperient; after which a light vegetable bitter, decoction of bark $\mathfrak{z}\text{ij}$., compound infusion of gentian $\mathfrak{z}\text{ss}$., tincture of calumba $\mathfrak{z}\text{i}$., and sulphate of magnesia $\mathfrak{z}\text{i}$. being given in a draught, every morning. Perhaps in a week the favourable influence of this plan may be perceived, or at least the certainty of its agreeing well ascertained. The tonic power of the medicine may be then augmented, or its aperient influence adjusted, so as to answer with more preci-

sion its purpose, in procuring easy and regular relief by the bowels.*

312. Where the complaint in the head is very distressing, the patient should be restricted from taking fluids, especially those that are thin and watery, tea being particularly improper. The application of a blister to the neck, if the severity of pain in the head is urgent, may be less objectionable than the abstraction of blood, but the medical treatment of the case is that which affords the best and clearest prospect of benefit.

313. The single principle in this complaint is that of converting the treatment by successive changes, as promptly as may be, into that kind of system by which, under the exhibition of the stronger preparations of bark, the tone and vigour of the stomach may be restored; while, by adding an aperient power to the medicine, a regular and free action of the bowels is kept up. The favourable influence of this treatment will soon be evinced by improvement in the pulse, by diminished pain or giddiness and confusion in the head, by some return of appetite, the patient now also feeling refreshed instead of fatigued, after sleep.

314. The above curative means will in some cases succeed in a few weeks, but in others they may require to be continued for several months, to complete the restoration of health. In occasional instances, when the symptoms have given way, change of air for a short time will be found to render the advantage more perfect and permanent.

315. Where the sympathetic affection of brain is attended with violent head-ach (166.), it is often connected with sickness at stomach, and often

* I have very recently, for the purpose of regulating the bowels, and thereby relieving many complaints induced by their derangement, had the seed of the white mustard recommended to me, as a valuable remedy; and have certainly seen it extremely useful. The dose is from a tea-spoonful to a table-spoonful, taken three or four times a day, for three or four months.

with bilious vomiting. Under these circumstances, the comparative relief experienced upon vomiting, has led many good practitioners to consider, that the readiest, and therefore best mode of shortening the duration of the attack, is to give an emetic, with a view to clear the stomach effectually. Now, it is most true that this is in many cases a ready and effectual mode of obtaining relief; but as every effort of vomiting necessarily incurs temporary, and sometimes excessive, fulness in the blood-vessels of the head, and as I have in the course of my life seen many ill consequences from the administration of emetics, it is a practice I am rarely disposed to sanction, and scarcely ever advise.

316. In some cases, even where the most powerful emetics have been said to afford the only chance of saving life, as in poisoning by opium, that action, sometimes difficult, or impossible, to excite, is not always necessary. I was some time since called up at mid-night to see a man, a green-grocer; who having procured several bottles of laudanum, from different shops, had just swallowed about five ounces. Being a strong athletic man, disposed to resistance, drowsiness not having yet come on, it occurred that the remedy nearest at hand was the citric acid. He was therefore immediately made to swallow, by cup-fulls, more than a pint of fresh lemon juice; and then, committed to the custody of trusty persons, he was led about the streets, and so kept upon his feet the whole night, to prevent sleep! After some time he at intervals begged, intreated, and imprecated in vain, to be laid down; by perseverance in exercise, the deleterious influence of the opium was prevented, his bowels were next morning cleared by a cathartic, and he perfectly recovered. The above was one of those instances, in which, from the obstinacy and strength of the patient, it would have been totally impossible by persuasion or power to have induced him to submit to the mechanical method lately proposed, for clearing the stomach by the syringe,

with an elastic tube, passed down into that cavity, through the œsophagus.

317. Where the attack of sick head-ach is connected with vomiting of a decidedly bilious character, it becomes a mixed case; and must be treated accordingly. If the bowels are costive, active purgatives should be first directed. Provided there be no particular confinement of bowels, a few grains of the blue pill may be given at night, and an aperient draught the next morning. Here again, the practitioner must take care that he is directed by the particular circumstances of the case, rather than by any general rules. Should there, however, be decided tendency to fulness of blood in the head, or should the pulse, skin, and general appearance indicate plethora, the treatment must turn upon the selection of aperients, or purgatives, frequently to the exclusion of tonic medicines.

318. Occasionally it may be necessary to obtain relief by bleeding from the neck, by cupping, or by opening a vein in the arm; provided the characters of plethora are quite clear. Neither is a knowledge of the state of constitution at one period, to be depended upon at another, for the tendency of the habit sometimes changes very remarkably. A lady, whose complaints some years back answered precisely to those described (164.), has latterly become so plethoric a subject, that any attempt to relieve at the present time her occasional attacks of sick head-ach, by those means that formerly succeeded, would, not improbably, prove fatal.

319. That particular variety of dyspepsia (167.) which seems to depend on a depraved state of the secretions, from the glandular parts and internal surface of the stomach, I have ventured to distinguish as giving origin to the scrofulous habit, because I have frequently seen them so associated with each other in the same individual, that when attentively considered, it was impossible to draw any other conclusion.

320. The unhealthy state of the gastric secretions might in most of these cases be taken for granted, from the permanently defective power of digestion, the irksome and continued sense of local uneasiness, flatulence, and acid eructations. This important fact, however, is occasionally proved, by the irritation from these fluids inducing the stomach from time to time to relieve itself by rejecting its contents; the matter thrown up being principally a stiff ropy bilious, sour, or corrosive, mucous fluid. In one instance to which I paid particular attention, my patient remarked, he always found himself better in warm weather, and that a voyage to the West Indies was sure to exempt him from his complaints until he returned to England.

321. As to the treatment best adapted to correct this state of constitution, I have in various instances tried the preparations of steel, the vegetable tonics, mercurials, aperients, and purgatives, without material effect. It is in this particular case that I conceive sarsaparilla calculated to prove an essentially useful medicine; although it is probably necessary to assist its favourable influence, by uniting it with other means. The plan most to be relied upon, is to place the patient upon a course of the compound decoction of sarsaparilla, in combination with the carbonate of soda, or potash, and any aperient medicine. The particular mode of adjusting these medicines to each other, and to the peculiar circumstances of the constitution, must of course differ in every two cases. In some instances, the uneasiness about the stomach is equalled or exceeded by uncomfortable sensations referred to the right side, arising from duodenal irritation and congestion; here, of course, the aperient influence must be carefully maintained. Many illustrations might have been brought forward, of the pathology, and successful treatment of this disorder; but one example distinctly marked has been considered sufficient. (Case 13.)

322. When the stomach not only loses its power

of digestion, but its capacity of retention also, it forms a very distressing complaint; but most particularly so, when it takes place during pregnancy. I have only in one instance seen this complaint assume an alarming aspect (169.), in which certainly the symptoms excited much apprehension, from their extreme severity. Towards the end of the eighth month of her pregnancy, however, the patient expressed a great desire for a lemon. The sour taste of the matter rejected, I confess, had previously suggested the propriety of directing alkaline rather than acid remedies, but as these had failed, she was allowed to take the juice of half a lemon, as an experiment. She thought it might steady her stomach, and so it did. Two lemons were therefore directed daily; and within a week all the importance of the complaint had vanished. This lady afterwards went well through her labour, and perfectly recovered.

323. Should indigestion, with want of power to retain food, have arisen from external violence, the only mode that appears likely to succeed is that adopted in an unusually severe instance of this affection, by Dr. W. HUNTER. (170.) As nothing in this case could be kept down, the doctor recommended two things; frictions with warm oil, before the fire; and the greatest care to avoid offending the weak stomach, either by the quantity, or quality, of what the patient took. He directed a single spoonful of milk only, to be given at a time, and that it should be the sole business of one person to watch and feed him; observing that this quantity given frequently, would be sure to nourish him. Under this plan, he gradually improved, and perfectly recovered.

324. In tracing the consequences of dyspepsia from drinking (171.), it was observed, that the stomach not only loses the power of reducing the food by digestion, but its faculty of retention also. Should the power of retention be only partially

destroyed, it becomes important to consider the principle on which, under that state of the alimentary canal, the most nutritious aliment, instead of being subservient to the purposes of support, may prove a source of misery to the unhappy patient; running into decomposition, and sometimes exciting in the bowels incurable disease.

325. One of the principal difficulties in the treatment of these complaints is, that the propensity to continue the destructive habit of excess is frequently so strong, that the patient has not resolution to break through it. As regards opinion, it should on another ground also be sometimes doubtful; it being frequently impossible to estimate correctly the prospect of success, even under strict observance of rule and restriction, from the occasional uncertainty of symptoms.

326. A most important question appears to be, whether it is proper or safe to lay aside at once that stimulus which has excited and kept up the disturbance. It appears to me, that if it can be done with safety, there can be little doubt of its propriety; although it may on the other hand be urged, that, by entirely withholding that power by which the constitution was sustained, the patient must sink into excessive exhaustion. The fact however is, I have seen several, and detailed two instances (Cases 14 and 17.), in which the disturbed state of the brain and stomach being considerable, I repeatedly laid unqualified interdict, prohibiting any thing fermented; and in each instance, on each occasion, the patient did perfectly well. I am aware that some physicians, for whose talents I have the highest respect, qualify this prohibition; but reference to the examples now given will suffice to prove the perfect safety of adopting a more decided rule; and from what I have seen in the practice of others, I believe recovery is more rapid under a complete, than under a partial abstinence from fermented liquors.

327. Where the excitement has been extreme, the irritability of stomach scarcely permits it to receive solid or fluid. Under these circumstances, the most advisable mode of treatment appears to be the exhibition of bark, with opium. Provided the decoction and tincture of bark are so combined with the tincture of opium, as to produce some little influence upon the stomach, the medicine being given in the quantity of a table, dessert, or even tea-spoonful, it will scarcely excite vomiting; this repeated every half hour will soon enable the stomach to retain some warm milk or beef tea, given in the same restricted and cautious manner. In this way nourishment may be taken, with an advantage that will soon be sufficiently manifest. As the treatment proceeds, the tonic continued, the anodyne power must be gradually lessened, and if needful, an aperient eventually substituted. By two or three weeks' perseverance in this plan, the patient's health will commonly be essentially improved, if not entirely restored.

328. When habitual pain or tenderness in the region of the liver, uneasiness about the shoulder, or bilious tinge upon the skin, affords reason to suspect disturbance in the hepatic functions, occasional small doses of mercury internally, may with advantage form a part of the treatment; should acute local pain supervene, tonic medicines must immediately be laid aside, and perhaps give place to an opposite line of treatment, to be regulated from day to day by the state of the pulse, tongue, and other circumstances that may indicate a tendency to inflammatory action.

329. Accidental facilities for observation have led me to consider very attentively the influence of this state of stomach and system, in exciting sympathetic disturbance in the functions of the brain. Where this disturbance is considerable, the character of the delirium is too peculiar to be mistaken; and when a patient can be depended

on, or can be prevented from taking what would be improper, the treatment suggested (326.) will I believe, very rarely fail to relieve and remove the complaints; unless where comatose drowsiness, or symptoms of paralysis have already taken place, when the event of the case must of course be very uncertain.

330. In answer to what I have ventured to advance (173.) regarding the influence, or even the existence, of an impoverished condition of the blood, as observed in examining the brain under this state of constitution; it may perhaps be objected, that I attribute too much to the fluids, and too little to the solids. It is in some degree matter of opinion, but it is nevertheless founded on observation, and, I think, therefore on truth.

331. As far as I have traced the consequences of this complaint, it appears that so long as the injury to the general or local health falls short of the production of actual organic disease, the facility with which the constitution will recover itself, if only two conditions, correction of the habits, and proper treatment, are afforded, is often astonishing. Sometimes it is true, that in the stomach as in other organs, the pernicious influence of excess runs beyond mere derangement of function (Case 18.); but as regards that particular instance, the impression on my mind, from the symptoms and appearances, was, that had the long established habits of intemperance been laid aside, only a week previous to the fatal event, the stomach might probably have recovered itself, and under more regular habits of life, would most likely have remained healthy.

332. Where those symptoms are present which denote inflammation of the stomach (177.), the attack should be met with all the promptitude its importance demands. Large and repeated bleedings from the arm should be succeeded by cupping glasses, or leeches to the pit of the stomach; a fomentation may then be directed, or the patient

be immersed in the hot bath. A large blister should be afterward applied to the seat of the pain. The lower bowels, also, may be partially cleared, by a laxative injection. Medicines, however, can scarcely ever be retained on the stomach until the violence of the attack has abated, when any mild cathartic mixture may with advantage be frequently given, in small quantities; so as effectually to cleanse the canal. Where acrid substances have been taken, the patient may be directed to drink freely of mucilaginous liquids, to assist their evacuation, and sheath the stomach. When suppuration has once taken place, little more can be done than to keep down arterial action, allaying irritation by the regulation of the bowels, and the occasional direction of anodyne and other antispasmodic medicines; and by the observance of the mildest farinaceous diet.

333. In those painful affections of stomach, arising from dyspepsia, connected with habitually confined or torpid bowels (185.), the attacks of uneasiness are often distressingly painful. The treatment that appears to be most useful, consists in first clearing the intestinal canal by some active aperient mixture, and then keeping up for the space of some weeks a regular action of the bowels by a draught containing some light tonic, united with a gentle aperient influence; the degree of tonic power being graduated to the circumstances of the case, and so progressively increased, as to leave the bowels at the end of the term in a capacity to carry on their proper action without further solicitation; upon the principle more fully explained in my essay upon that subject.

334. When the matters passed by stool evince the existence of morbid secretions within the alimentary canal, these may very probably have first arisen as the effect of irritation, from the imperfectly digested contents of the bowels running into fermentation, accompanied most commonly with fla-

tulent and acid eructations; under these circumstances, the above medicines may be temporarily combined with magnesia, or either of the fixed alkalies. As a general rule, however, alkaline remedies should always be directed with reserve, and never continued longer than necessary; for if not actually required, they in my opinion very generally do harm.

335. Dyspepsia connected with violent pain at the stomach, from gout (189.), is most certainly capable of relief when treated as a complaint of a spasmodic nature. Upon this principle opium, æther, the compound spirit of ammonia, and of lavender, are the medicines that are to be principally relied upon, and they will sometimes act like a charm. Where, in the urgency of the moment it is not possible to wait till medicine can be obtained, some hot spirits and water may frequently be administered with advantage.

336. These attacks however, should always be regarded as of serious tendency; for although they may in early life be successfully treated, they may still at some later period prove fatal, notwithstanding the most assiduous care (Case 20.); particularly where the energies of the constitution are labouring under the powerful though silent influence of the depressing passions.

337. It sometimes happens, that depraved secretions of a peculiar nature, most probably the result of morbid action in the stomach, are attended with most unusual and violent irritation, spasm, and cramps, in the voluntary muscles of the limbs. Two very uncommon instances of this description have been mentioned (191.); and another of a similar nature, in which I found the loins instead of the limbs were the seat of the irritation and spasm, is adverted to in my Essay upon the Diseases of the Bowels. (66.)

338. The first object, must be to favour the evacuation of the offensive matters from the sto-

mach and bowels ; and the next is to institute such a course of medical treatment as may improve and correct the functions of these viscera, so as effectually to prevent the generation of such matters for the future.

339. In the first place, should it be evident that the stomach is oppressed by morbid contents, it may be sometimes expedient to direct a gentle emetic, the favourable operation of which may be at once assisted and moderated by the patient's drinking freely of warm camomile infusion. The next step must be that of clearing out the bowels ; and this may be conveniently done by an infusion and tincture of senna, with some aperient salt, and any of the alkaline carbonates. These medicines, given in small doses must be frequently repeated, until the stomach and bowels are satisfactorily cleansed ; the evacuations at length exhibiting only the recent and healthy fluids secreted into the intestines.

340. The prevention of such complaints in future is only to be effected by the means calculated to improve and restore the healthy functions of the stomach and bowels. This object may perhaps be most readily accomplished by a medical plan similar to that already recommended. (321.)

341. Where attacks of severe pain at the stomach, with dyspepsia, are attended with appearances indicating disturbance in the hepatic functions, the treatment must include the occasional exhibition of small doses of mercury ; and where the state of the evacuations, and colour of the skin, are by these means rendered natural, the extreme debility of stomach and bowels may I believe always be relieved, and their functions at length most frequently restored, by a combination of the tonic and aperient plan, provided it be so directed as to be accurately adapted to the circumstances of the patient's constitution.

342. Should the bilious appearances be attended with symptoms indicating a tendency to inflamma-

tion in the liver, the treatment must be regulated accordingly. Bleeding from the arm, provided the pulse warrant it, and should the pulse fail, by cupping or leeches near the part affected; must be had recourse to. Aperient medicines first directed, should be succeeded by mercurial preparations, so ordered that the system may feel their influence, without suffering violent excitement.

343. The continuance of the symptoms of inflammatory action, not very unfrequently lead, as has been observed (197.), to abscess in the substance of the liver, which may occasionally discharge itself, through the medium of adhesion to some of the neighbouring parts, either externally through the parietes of the abdomen, or upwards through the diaphragm into the lungs, or lastly into some part of the intestinal canal; in either of which cases nature commonly succeeds in relieving herself, so far as regards getting rid of the collection of matter.

344. By these means the patient is sometimes unexpectedly placed in the way of doing well, rather through an effort of nature, than any successful exertion of art. Instances are not wanting where abscess of the liver has made its way through into the lungs, and these viscera previously healthy have permitted the escape of matter by the air passages and trachea as long as required, or until the cavity of the abscess contracting itself has at length healed, and perfect recovery has been the result. The same happy consequences have also in various instances followed upon abscess of the liver breaking into the intestinal canal. In these cases, however, the constitution is mainly dependant upon its own powers; the assistance that art can afford being generally confined to the supporting those natural powers which are alone effectual, by attention to the functions of the digestive organs, and care to prevent the lodgment of morbid contents, where these are likely to occur.

345. When a tumor points externally in the region of the liver, in connection with symptoms that indicate inflammation, the swelling feeling soft, may be concluded to be an abscess that requires being opened. Under these circumstances, discernment and caution will however, not only be highly useful, but indispensably necessary. (198.) Should the tumor present the purulent contents of an abscess, it will be invariably safe to make an opening into it; but should it on the other hand, prove to be a tumor produced by a retention of bile in the gall bladder, the safety of making an opening will depend on the circumstances above explained. (200.)

346. The mode of operating that appears to me the best, where a tumor so situated requires opening, is first to divide the integuments and external parietes with the scalpel, and then pass in a small trocar, when on withdrawing the stilet the purulent contents will flow off by the canula; which may then either be removed or allowed to remain, according to circumstances. One advantage of this operation is, that should the contents of the tumor unexpectedly prove to be bile, the canula will not only prevent the immediate escape of that fluid into the abdomen, but kept in its place for several days will be very likely to excite that degree of inflammation which by inducing adhesion between the opening in the gall-bladder, and that in the external parietes, may insure the eventual safety of the patient.

347. Should it appear from the symptoms (211.) that biliary calculi are concerned in their production, the administration of emetics has been very generally recommended, and may frequently be useful; but having watched their effects, when given upon these occasions, I cannot consider them altogether safe, and should always prefer the previous trial of other means. Where the symptoms of biliary calculi are clearly established, the best line of

treatment appears to be, first to clear the bowels by a gentle aperient, and then to direct one or two grains of the blue pill, with half a grain of opium, every six or eight hours ; these remedies being occasionally assisted either by immersion in the warm bath, or by anodyne fomentations to the pit of the stomach.

348. The opiate and mercurial plan should be continued until the complaints give way, or until the system feels the mercurial influence ; when the medicines may be given at longer intervals, so as to keep up a moderate degree of excitement ; the warm bath or fomentations being repeated, according to the urgency or continuance of pain.

349. Unhappily, the obscurity of the symptoms is occasionally so great, as to render it impossible to do more than form a probable conjecture as to the existence of biliary calculus ; even where its magnitude is such as eventually to destroy life. (Case 25.) Had the cause of the complaints in that instance been early known, the necessity for the warm bath would have been more absolutely insisted upon, and might have afforded some additional chance of relaxing the bowels sufficiently to have allowed the calculus to make its way.

350. In these critical and dangerous efforts of nature, the constitution has in various cases evinced its powers of recovery to a surprising degree, particularly in some of the instances noticed in the preceding observations. (217.) The extent of these powers however, cannot be in any case with certainty calculated upon ; and although, by a constant regard to the course of the symptoms, and by the careful inspection of every thing passed by the bowels, the probability of the ulcerative process having taken place may generally be pretty well established, it cannot ever be positively known during life. Where, from the size of the calculus voided per anum, and other circumstances, there is reason to conclude it has escaped by ulceration,

the greatest care must be taken to support the strength, and to raise up and restore the failing powers of an exhausted constitution.

351. In these cases, a light and nutritious diet, aided perhaps by the cautious administration of light tonic medicines, or the occasional exhibition of mercurial preparations, will commonly be found serviceable; although medicine will frequently do very little. This appears to be one of those cases, in which change of air, and change of scene, by diverting the attention, and exciting the healthy actions of the system, will occasionally conduce essentially to the re-establishment of health.

352. It now and then happens, although by no means a frequent case, that dyspeptic symptoms are induced by the slow progress of disease originating in the omentum (225.); in the instance referred to, there was reason to believe the affection of stomach was confined to a mechanical impediment to its natural power of expansion, from a disease admitting of little alleviation by medicine. So far, however, as an irritable state of the organ might latterly have been concerned, the exhibition of saline, effervescing and anodyne medicines, might probably have been useful in relieving sickness.

353. Of dyspeptic affection of stomach, connected with inflammatory tendency in the spleen, I have selected several examples (226.), the object of which has been to determine the best line of treatment by a close attention to the pathology of the complaint.

354. Our total want of knowledge as to the healthy functions of the spleen, may render us less capable of reasoning correctly upon the tendencies of its diseases; but these difficulties should operate to increase, rather than to diminish, the assiduity of research.

355. It has long appeared to me, that however correctly the symptoms attendant upon tumid

spleen may be held inflammatory, they are so far peculiar, as to stand necessarily connected with deficient tone of stomach and bowels; not only manifested by the dyspeptic state of stomach, and most frequently slow rather than quick pulse, but by torpor of the bowels, accumulation of unhealthy secretions, particularly a peculiarly tenacious mucous matter. Neither does it appear less manifest that although the accession of pain in the membranous coverings of the spleen may be truly inflammatory, the tumid state of that viscus is in fact owing to a languid and feeble circulation, allowing congestion and accumulation of blood, and thus creating a sense of distress partly from over distension in the part.

356. The treatment to be recommended for the relief of this state, first requires that the bowels be effectually cleared by some active purgative, when should the pain in the side be very acute, some blood may be taken from the part by leeches, or cupping; after which gentle diaphoretics and occasional anodynes, a blister to be kept open upon the side, aided by constant care to maintain free action of the bowels, together with the observance of a light diet, will commonly soon succeed in relieving the complaint.

357. When the acute characters of the affection have disappeared, the only remaining care will be the relief of the more obvious consequences of debility,—the deficient power of stomach, and defective action of bowels. These changes however, in the present case, can safely be brought about only by very slow degrees. Any endeavour to effect them quickly, will hazard the sudden return of acute pain, probably with aggravated severity. The most eligible plan appears to be, to commence with an infusion of senna, and any purgative salt, with a light bitter infusion; so directed as to induce two or three motions daily. To this prescription, in a few weeks, may be added a small

proportion of decoction of bark, taking care that while the increasing influence of the tonic is watched, the medicines are from time to time so adjusted, as to ensure a constantly free action of the bowels. By this means the constitution may be brought advantageously under the influence of the tonic and aperient system, which, provided its effects are carefully watched and regulated, may be rendered highly conducive, if I mistake not, to the permanent re-establishment of health; by which is meant, that instead of the complaint returning as before, perhaps every few weeks, the patient shall enjoy an exemption for several or many years.

358. The occasionally serious consequence of neglect or carelessness in diet to those who labour under a tumid state of spleen, I have thought it right to illustrate, by the mention of a case (234.) in which the patient's thoughtlessly taking food offensive to the stomach, by its quality and quantity, induced sickness, and impetuous vomiting, under which, in all probability, some small vessel within the substance of the turgid spleen gave way; thus laying the silent, though immediate, foundation of fatal disease; which, under more early and steady attention on the part of the patient, might never have taken place. The appearances after death favour this conclusion, having been precisely such as would be induced by the accidental rupture of a blood-vessel supervening upon a previously tumid and irritable state of spleen.

359. With regard to those dyspeptic complaints, which if left to themselves occasionally terminate in disease, it is important to bear in mind that with very few exceptions every disease originates in disorder, and that provided the patient be only reasonably attentive to his early feelings of impaired health, that which commences with disturbance of function, may almost invariably be prevented from declining into derangement of structure.

360. Where a relaxed state of the coats of the

stomach has induced polypose disease upon its internal surface (236.), the treatment best adapted to check its progress, will probably consist in the exhibition of such medicines as may conduce to improve and restore the tone of the digestive viscera, and such as may at the same time, if necessary, regulate or repress any occasional excess of irritability in the stomach or bowels.

361. Should there be reason to suspect the existence of ulceration in the stomach (241.), but little can be done to favour the restoration of health, beyond carefully avoiding every cause of irritation, and supporting the strength by the mildest and least stimulating farinaceous and perhaps milk diet. Where irritation, under these circumstances, becomes troublesome, the preparations of opium, and other anodyne medicines, may be directed with advantage.

362. In the treatment of complaints which, from the attendant circumstances and symptoms (245.), may indicate a tendency to schirrous affection of the stomach, it is perhaps more than in any other case necessary to be directed entirely by symptoms.

363. Few general rules, therefore, can be laid down with advantage for the management of these complaints. Attacks of violent pain in the region of the stomach, should they exhibit the characters of inflammatory action (177.), must be treated accordingly (332.), so far as the state of the pulse, and of the system, may warrant. Commonly however, the attendant pains are most effectually relieved by the judicious use of anodyne medicines. Opiates with this view, either alone, or combined with hyoscyamus, will generally prove extremely useful. A remedy strongly recommended by Dr. CULLEN and others, as effectual in relieving distress and pain in all complaints of this kind, is belladonna, to be directed first in small doses, and afterwards increased, according to the impression made upon the constitution. Should it be considered

desirable to try the influence of this medicine, during the irritable condition of stomach that may prevent its being given internally, a decoction of the fresh leaves may with much advantage be applied, as a fomentation, to the pit of the stomach, or a decoction of poppy heads may be directed to be mixed with it, for this purpose.

364. A practice, frequently recommended in these cases, has been the placing the patient under the influence of what has been termed an alterative course of medicine, consisting of calomel or other preparation of mercury, and of antimony. Of this plan of treatment I have had an opportunity of seeing a great deal, in most varieties and in almost every stage of these diseases, without having in a single instance found it evidently beneficial; in fact, it appears to me that its only manifest action consists in establishing an additional irritation in the system, rather operating injuriously than otherwise.

365. In these, as in most other complaints, particular and constant attention should be paid to the bowels, to insure regular action, and prevent accumulation of their contents. With some persons, this purpose may be satisfactorily answered by occasional doses of castor oil, but with others it will not do; with many it fails to perfectly evacuate the bowels and cannot therefore be depended upon, while with some it excites so much irritation as to render it exceedingly objectionable.

366. Where there is reason to believe that schirrous disease has proceeded on to ulceration, it has been observed, that the patient can never be considered in a state of safety (262.), seeing that in its progress, ulceration may at any moment reach some artery or vein of importance, thus giving rise to excessive or even fatal hæmorrhage. When fresh blood is thrown up from the stomach, in quantity, under these circumstances, the treatment must partly be regulated by the pulse, which if full must be promptly lowered by a copious bleeding from the

arm; but if, on the contrary, the rapidly sinking pulse, and cold clammy skin, demonstrate that the circulation is already nearly exhausted, this measure is of course out of the question.

367. Internally, the various astringent medicines may be directed; acidulated infusion of roses, spirit of turpentine, or the tincture of kino. The ultimate benefit to be derived from these and similar remedies, although perhaps the most proper means, is not however to be calculated upon with much confidence, for the disease still remaining, will most frequently in spite of medicine continue to make progress, although the hæmorrhage may perhaps for a time be restrained.

368. Should the sanguineous fluid rejected from the stomach have rather the appearance of dark coffee-grounds (270.), than of recently effused or fresh blood, the attentive consideration of the previous history must determine the probability of its having been thrown out from the small vessels upon an ulcerated surface. Where this is concluded to be the case, the treatment recommended (367.) is, upon the whole, the most expedient, although it rarely proves eventually successful.

369. When the characters of the fluid vomited are more particularly those that occur in melæna, there being no decided reason for concluding the hæmorrhage the consequence of ulceration, but more probably the result of effusion from the exhalent or capillary system, the treatment must be regulated according to the principles laid down in the essay referred to. (270.)

370. The treatment most likely to prove useful, where the stomach has suffered injury by drinking or swallowing scalding water (274.), will be I conceive the exhibition of saline or effervescing medicines, gentle aperients, leeches, or bleeding from the arm, the warm bath, and a blister upon the pit of the stomach. Should there be much tendency to sickness, medicines to act upon the bowels must

be directed with caution, from the risk of exciting vomiting ; upon which account it may sometimes be more proper, in the first instance, to direct a laxative enema to be thrown up, which will have the effect of relieving the lower portion of the alimentary canal, without the chance of disturbance to the stomach.

CASE 1.

Relaxed Uvula ; producing Dyspepsia, Cough, and supposed Decline.

September, 1819. I was consulted by an old brother officer, Major P. for very troublesome symptoms, irritation, cough, and constant distress about the throat and chest, for which he had the preceding year been under the care of the late Dr. BAILLIE, and subsequently Dr. PEMBERTON ; at which period the symptoms induced suspicion of approaching consumption. He said he was sure there was something wrong in his throat. On looking into the mouth, I perceived the soft palate and particularly the uvula relaxed, hanging down so low, as frequently to drop into contact with the epiglottis. For this relaxation, he observed, Dr. PEMBERTON had ordered various astringent gargles, but without material benefit.

The inconvenience he suffered was very great, for besides the above symptoms the irritation frequently induced sickness, and sometimes vomiting ; very materially impairing the appetite, and deranging the functions of the stomach.

I told him that in my opinion the only effectual mode of relieving his complaints was to remove the uvula ; but that as he had stated he had consulted

Dr. KERRISON, I should prefer having his sanction in what was proposed; and should request he might be present when it was done.

The next morning, a ligature, passed through a steel instrument, with a small ring at its end, was conveyed through the mouth, and round the uvula. In the first attempt, the instant the uvula felt the touch of the thread it retracted and was gone. On the second attempt however, watching the moment when the uvula was low, and the ligature high, the noose was tightened, and the ends cut off.

A little temporary irritation was induced by the operation, which, by gargling with warm water, soon subsided. Little inflammation followed. The strangulated part discoloured and died, soon became flaccid, and on the fifth day came away. A gargle of infusion of roses was requested to be occasionally used; and in a few days the part was healed.

November 17, 1824. This gentleman called on me, so much changed for the better, in point of flesh and appearance, that I scarcely at first recollected him; he said he had enjoyed excellent health, and experienced not the least tendency to any return of his complaints.

CASE 2.

Enlarged Tonsil, removed by Ligature.

February, 1818. I was consulted by a lady, aged 23; for an enlargement of the tonsils, arising first from severe cold. These parts had been slowly increasing in size for more than a twelve-month; and while the swelling was painless, it was disregarded. Of late, however, the degree of tumor had rendered it difficult to swallow, and even occasionally, as the quantity of swelling was somewhat variable, the free passage of the air in re-

spiration was interrupted ; circumstances which naturally gave her alarm.

Upon looking into the throat, the right tonsil was seen as a large rounded tumor, occupying three-fourths the breadth of the fauces, the remaining part of that space being filled by a smaller similar tumor, in the left tonsil. On close inspection, I perceived that a part at least of the distress she laboured under was owing to irritation, from the contact of the larger tumor having induced some extent of ulceration on the opposite surface of the smaller. Local applications, and medicines of various kinds, by the advice of physicians and other medical gentlemen, having already failed to make any impression on the disease, I advised her to have the larger tumor removed ; as the means not only of relief from the principal distress, but also from the ulcer upon the opposite side, which on the removal of its evident cause, it might be presumed, would soon heal.

March 12. With the kind assistance of Mr. HEAVISIDE and Dr. KERRISON, I performed the operation ; proposing to include the tumor in a ligature, tightened round its base, with a running noose. With this view, I had two instruments made of a convenient size and form ; one was a steel wire set in a handle, having its point turned aside, and mounted with a small flat bottom, the face of which was cut into at right angles, leaving four points, smooth and polished. The other was a similar wire in a handle, with a small ring at the end, of sufficient strength. The object of the first instrument was to enable me to press the ligature lightly into its place, round all parts of the basis of the tumor ; that of the second to push along the knot of the running noose, till sufficiently tightened.

In the operation, Mr. HEAVISIDE undertook to depress the tongue, when widening the noose of the ligature (of fine whip-cord) to the required size,

I had little difficulty, with the thumb and finger of the left hand in setting it nearly in its place, assisted by the forefinger of my right hand. Allowing an interval of repose and breathing, the ligature was then, by aid of the instrument, set correctly round the base of the tumor, and answered its purpose with precision. The outer end of the ligature then passed through the ring of the other instrument, the ring was passed on to the knot, which by this means, the end of the ligature being held fast, was pushed steadily forward before the ring, until tightened sufficiently; during which drops of blood started from various points of the tumor, and the patient for a short time suffered acute pain.

The operation finished, the tongue was instantly released, the patient allowed to breathe, and wash out the mouth and throat; after which the end of the ligature was attached by a slip of sticking plaster to the outside of the angle of the mouth. The diet confined to soft food, broths, and milk; and an opiate directed. Two days afterward the tumor was still tense, but from this time gradually sunk, the swelling and pain hourly lessening, the voice becoming progressively more clear, as the breath became more offensive.

Towards the close of the *8th day*, while gargling and cleansing the throat, the loosened shreds of the tumor, with the ligature, came away, to the great joy of my patient. The extent of constriction produced by thus tightening a ligature between the tumor and its attachment, much exceeded what I had supposed possible. The diameter of the noose, when it dropped off, measured only one-eighth of an inch.

The little ulcerated surface resulting from the operation, gargled occasionally with an infusion of roses, was perfectly healed within a fortnight, and also the ulcer upon the opposite side; leaving her in perfect health.

CASE 3.

Abscess of the Œsophagus.

February 10, 1822. I was called up during the night to see a young woman, S. N. who six weeks before had awoke suddenly in the night, with acute prickling pain in the throat, in a spot exactly opposite the top of the sternum. The prickling pain was greatest if she attempted to swallow a little fluid; her sensations were those of a swelling, threatening suffocation. With so much difficulty in breathing, she passed a very bad, and sleepless night. The next morning better, she was able to eat her breakfast pretty well.

She now remained well, till on the evening of *February 10*, she felt her throat rather sore. During the day she had swallowed with perfect ease, but awoke at midnight with a feeling of impending suffocation, from a sense of fulness confined entirely to that part of the throat, before affected. In this point, excessively painful to the least external pressure, she felt a violently acute prickling heat. The easiest position was sitting up, at perfect rest; when she lay down, it felt to rise in the throat, with aggravated difficulty of breathing. The voice was impaired; and the exercise of it painful. No material affection of tongue or skin. Pulse rather hurried, with much anxiety. An anodyne draught was directed, with little effect.

February 10, nine A. M. Symptoms unaltered, had passed the night sitting up. About noon to-day, she endeavoured to swallow a little tea. It did not pass lower than the swelling, where it seemed to move or roll about, and then was rejected, with violent sickness and straining; which brought off some thick yellow matter (evidently purulent) with other fluid, from the stomach. A sense of immediate and perfect relief, both from the swelling

and pain, the moment she was sick, naturally suggested to her the idea that something had broken; for she could now lay down with comfort, and slept an hour. In the course of the afternoon, I directed her some castor oil, which operated thrice.

February 11. After resting well through the night, she felt herself much better.

February 12. Could swallow with ease and comfort, and considered herself in every respect restored to perfect health.

November 1824. Upon enquiry, I was happy to hear there had been no return whatever of the above complaint.

CASE 4.

Abscess behind the Œsophagus.

August 7, 1822. I was requested by Dr. JAMES to examine the body of a fine boy, aged eight years, who (*July 30*) had at school swallowed a double pointed bit of slate pencil, an inch long, with a string tied round the middle. The boy, frightened, could not get it up, and several other boys in fear of the master, pulled successively with force, and at last with great pain succeeded in extricating it.

From the time of the accident, he could only swallow liquids. A medical gentleman who first saw him, sent some castor oil, which he said, he hoped would soon set all right; and did not repeat his visit. The child attempted to swallow the castor oil, but with extreme pain and retching it was rejected. The parents under this direction considered little more was required than a little time, and accordingly supported him on slops and milk; the poor child however complained of constant and great pain in the neck, although he was extremely patient.

August 2. He had some, and the following day

more, difficulty in breathing; with a croupy noise, and much anxiety.

August 5. The mother called on Dr. JAMES, who the next morning visited him. At this time extreme anxiety was depicted in the countenance, a rapid small pulse, pain and evident fulness about the neck, with excessive aggravation of suffering in every motion of the head or neck. He could now swallow nothing. Leeches, and a blister, were ordered; and applied.

August 7. Early this morning he died; having all along complained of great pain not only about the fore part, but also at the back of the neck, and between the shoulders, which parts were so tender, that he at last entreated not to be moved at all.

On inspection after death, the whole neck felt evidently full, and thrown forward, as if by a soft tumor. I dissected cautiously through the lateral parts of the neck, down to the transverse processes of the cervical vertebræ, soon opened into an abscess seated in the cellular membrane behind the œsophagus, filled with tenacious greenish pus, occupying the whole breadth of the line of vertebræ, and extending from the top of the pharynx downwards as low as the upper part of the sternum. The œsophagus did not appear to have been lacerated, or torn through in any part.

The trachea and larynx were thickly covered internally by a secretion in colour and consistence very like pus; with some mucous tenacity, but without any degree whatever of discoloration, or redness, of the inner membrane. The rima glottis was, from tumefaction, nearly closed.*

August 19. Mentioning the above circumstances to Sir ASTLEY COOPER at Mr. HEAVISIDE'S, he said he had lately seen a lady, who swallowing a part of the breast bone of a pigeon, had grazed her

* The diseased parts are preserved in Mr. HEAVISIDE'S Museum.

throat which was for a week very sore, and then got worse, and with difficulty of breathing and greater difficulty in swallowing, within another week proved fatal. A large abscess was in this case formed between the pharynx and upper cervical vertebra. He was just after this requested to look at a tutor, who had difficulty in breathing and swallowing; alive to the thing, he looked into the pharynx attentively, and touching it felt a fluctuation, punctured it, let out matter, enlarged the opening, and the man got perfectly well.

CASE 5.

Extensive Ulceration of the Larynx; with Spasmodic Stricture in the Œsophagus.

December 4, 1823. In conjunction with Dr. HOOPER, I was consulted, by Mr. G. a middle aged gentleman, who had come up to town for advice. He stated that four years since, much exposed to fogs and damp air, he had taken a most severe cold, that settled with fever about his throat and neck. This affection for a time neglected, he had ever since had hoarseness, a sense of soreness in the course of the trachea, and a constant spitting of frothy mucus. In addition to the above, a progressive difficulty in swallowing had taken place, almost from the commencement of his complaints, which with increasing emaciation and weakness, constituted the leading features of his disease, for which without the least relief, he had already been under the care of various physicians, and surgeons, of character. On looking attentively into the throat, nothing particular was perceived; but the depression of the tongue, which always excited irritation, was followed by a copious rejection of glairy and ropy mucus.

The opinion at once formed by Dr. HOOPER and myself was, that ulceration existed within or about

the larynx, from which there was scarcely a possible chance of eventual recovery; the family, however, notwithstanding this unfavourable opinion, entreated that for their future comfort, the Doctor would continue his attendance, which he promised to do. The pulse was at 90, and rather hard, skin hot, and tongue white. Proper medicines directed for the relief of his constitutional symptoms, it was agreed that a bougie should be occasionally passed. A blister was directed to the throat.

December 12. An elastic bougie, three-eighths of an inch diameter, had been several times passed, much to his relief, through the contraction, which was opposite the lower end of the pharynx. The instrument exciting much irritation, could only be borne two minutes. His facility of swallowing liquids was much improved by the operation, and the power of swallowing solids partly recovered.

December 22. An attack of acute pain in the side had required appropriate medicines, and the application of a blister. The introduction of the bougie was continued. The stricture only admitted the bougie after pressing it lightly for a minute; it then passed through, and was retained for nearly two minutes more, and withdrawn. This operation was always followed by more or less cough, with rejection of mucus, after which he soon recovered. He said he was now able to swallow with tolerable ease, but for the sense of soreness and rawness at the top of the larynx, over which he felt every thing must pass; the distress from which took away his resolution to eat, though he now could swallow. Tongue white; pulse 94.

December 30. The irritation and distress in swallowing so great, that he could scarcely ever take any food, even in a fluid form. He was persuaded he should die for want of support. He was directed to have a glyster of strong beef tea injected night and morning, and one of warm milk in the middle of the day. He said afterwards he thought

the beef tea answered best, or that at least it was not attended with the rumbling and wind that followed using the milk. It was recommended that of the beef tea a much larger quantity (several pints) should be very gradually and slowly injected; hoping it might thus find its way further up in the bowels, and stand a better chance of proving useful.

January 14, 1824. The inhaling the fumes of heated tar, with the internal use of bals. copaib. and opiates, had decidedly alleviated the previously intolerable pain in deglutition, and spasm of the glottis. These symptoms were so much relieved, that he was again enabled to take solid and fluid nutriment in sufficient quantity by the mouth, and the injections were consequently laid aside. The character of the expectoration was not only changed from a dense, thick, yellow matter, to a light thin, frothy, white mucus, but its quantity was lessened to one-third of what it was before. An eruption, however, appearing upon the skin, with considerable oppression in breathing, required the laying aside the bals. copaibæ, when the symptoms presently returned to their former state. Pulse 120, with a hectic flush on the face.

January 18. Early this morning, he died; exhausted by continued irritation and pain. Upon opening the cavity of the abdomen, the liver was sound, but a small calculus was found in the gall-bladder. The stomach was healthy; and the small intestines were in a perfectly natural state. The head of the colon and cœcum, and the closed extremity of the appendix cœci vermiformis, felt altered by disease. The former of these portions of bowels felt soft, thickened, and pulpy; the latter as if thickened and indurated at its extreme point. When these parts were laid open, the appearances seemed those of ulceration; but when carefully injected, these appearances were no longer equivocal. I found the cœcum in its opening

into the colon, ulcerated all round, the cellular surface of the ulcer deep, brown, and sloughy. Round the opening into the appendix cœci was another ulcerated ring; then the fine inner membrane lining the appendix was seen finely and clearly injected; till within two-thirds of an inch of its apex a large ulcer was manifest, passing quite round its cavity, and extending nearly to the end of the canal. External to the cavity, at the end, was now seen, quite distinct from the fine injected membrane, the section of a small white soft tumor, deposited in the cellular membrane, between the peritoneal and internal coats of the tube. The contrast was beautiful, the natural structure well injected, that of the tumor not injected at all.

The transverse arch of the colon, for about eight inches, the sigmoide flexure for about four inches, and the lower part of the rectum for the space of seven inches were diminished in size by a uniform contraction, so as to prevent the passage of contents, forming a compact cord, most probably from dis-use, and the want of accustomed distension by solid matters.

On removing for examination the parts forming the principal seat of disease, the epiglottis was found nearly destroyed by ulceration. The membrane covering the arytenoide cartilages, and lining the upper part of the cavity of the larynx, was very much thickened from disease; it had an irritable vascular appearance, excreting a matter, and exhibiting characters of ulceration, though modified by the peculiar texture of the surface.

The thyroide cartilage was so firmly ossified, that two knives were broken in the attempt to cut through it; and in order to inspect the cavity of the larynx, it was found necessary to divide it with a saw.

Within the Œsophagus, the contracted part of the canal, just opposite the lower part of the larynx, was sufficiently obvious; as however part

of the contraction had arisen from spasm, the diameter of the tube appeared less diminished than it had been during life.

CASE 6.

Occasional Spasm in the Œsophagus.

August 16, 1824. A middle aged lady visited me for a difficulty in swallowing, by which for the last few days she had at intervals been harassed. This complaint seemed only relieved by swallowing a little cold water, had repeatedly disturbed her from sleep, and obliged her to jump suddenly up to prevent being choked; with a sensation of something irritating the throat, that could neither be swallowed, nor brought up. Phlegm, she thought, did form, but at that time she never could get it up. She swallowed solids in general perfectly well, but under this affection could only with difficulty swallow fluids.

To determine whether any contraction existed, I passed a small silver ball, half an inch in diameter; it was stopped at the bottom of the pharynx, by a contraction which the moment it was pressed, she recognized, and afterwards said was the exact seat of the affection.

The complaint being of so occasional and transitory a nature, she was advised in all probability the passing an instrument might be unnecessary; that as medicine appeared likely to do more for her than surgery, she had better consult Dr. JAMES, who had formerly attended, and for whom I gave her a note; adding, that should the Doctor think it necessary, I should be extremely happy to see her again.

Dr. JAMES subsequently informed me, that the complaint afterwards became inflammatory; but that, by leeches, and blistering, in aid of antispasmodic and other medicines, it was relieved, and eventually removed.

CASE 7.

Spasmodic Stricture in the Œsophagus.

February 6, 1822, I was desired by Mr. T. to visit his wife, a lady aged 46, who, for three weeks, had been under Dr. HOOPER's care, in the last stage of pulmonary consumption. Her illness had been of a year's continuance, and had latterly induced symptoms of extreme irritation about the trachea and larynx, with hoarseness and purulent spitting.

For the last few weeks, a gradually increasing difficulty in swallowing had proved an additional source of distress, and at length occasionally prevented even fluids from reaching the stomach, the attempt terminating in rejection of the liquid, mixed with a quantity of ropy mucus.

An elastic œsophagus-bougie, of very moderate size, was stopped at the bottom of the pharynx, although, by gentle steady pressure, it was passed into the stricture. A considerable rejection of frothy mucus followed the removal of the instrument.

The power of swallowing was permanently relieved, and in fact so much improved by the above application, as to render a repetition of the operation unnecessary. The day previous to the bougie being passed, she had the power of eating and drinking at breakfast, and by twelve at noon was unable to swallow even a tea-spoonful of any fluid, every attempt incurring distress and failure. The more formidable complaint, however, in her lungs still continued to make such rapid advances, that she sunk and died, *February 21.*

February 24. On opening the chest, the lungs partially adherent, were almost universally tuberculated, and towards the upper part of the superior lobe on the right side, a number of tubercles together had formed a vomica. Purulent tubercles, thinly scattered, were found in every part of the lungs. On removing and laying open the trachea,

I found its inner membrane in parts vascular and irritable, its whole extent being covered with a purulent mucus. The larynx exhibited no particular change. The œsophagus, opposite the lower part of the larynx, was contracted to half the diameter of the little finger, for the extent of nearly half an inch; below this point, the canal was relaxed and healthy. The contracted part was not materially thickened, nor altered in texture. It was very easily relaxed, and when laid open and cleared, its internal surface was, at the strictured part, just perceptibly rough, as if from effusion of coagulable lymph, in some preceding inflammatory action, though unattended with any inflammatory blush.

CASE 8.

Spasmodic Stricture in the Œsophagus, with deceased Stomach.

May 17, 1824, I was desired to meet Mr. CARRICK, surgeon, of Kensington, upon the case of Mrs. T. a lady aged 69, who complained of frequent pains in and about the throat, occasionally passing thence down to the stomach, with considerable difficulty in swallowing. Introducing a silver ball, three-eighths of an inch diameter, I found a spasmodic contraction at the upper end of the œsophagus. With a little steady pressure the instrument slipped through, and then passed freely down. In withdrawing it also, there was some little difficulty, but in a few seconds the instrument was released.

May 19. In consultation, it was decided that a bougie should be passed; the instrument was introduced by Mr. CARRICK, and retained in the stricture for about a minute.

May 21. She was able to swallow with much more freedom and comfort; but was with difficulty prevailed on to allow the bougie to be again introduced, although it passed the stricture with more ease than before.

May 24. The stricture so relieved in the throat, that the bougie was laid aside. While walking, she had the day before again felt a pain (long troublesome), which had returned with severity, as if at the cardia, or pit of the stomach. This pain was considered by Dr. HOOPER, who had previously been requested to visit this lady in consultation, as connected with the contraction above, which was also her own opinion. She sometimes swallowed food or medicine, and kept it down five, ten, or fifteen minutes; and then it was rejected, as if it had been lodged above the cardia. Jelly, jam, &c. she could however, in general, take and keep down.

August 26, 1824. Mr. CARRICK had the kindness to favour me with the following valuable communication:—

“DEAR SIR,—According to my promise, I have to inform you of the result of Mrs. T.’s case. Since you last visited her, no material alteration took place in the symptoms. Deglutition was performed with tolerable ease, but regurgitation speedily took place, with a copious discharge of glairy mucus. Debility and emaciation gradually increased, and she expired yesterday afternoon.

“With some difficulty I obtained permission to examine the body early this morning, and I regret exceedingly that time would not permit me to give you intimation of it, as I was anxious to avail myself of the leave granted to me without delay.

“I immediately examined the stomach. It was thickened throughout its whole extent, excepting towards the pylorus, from one to two inches; adjoining the cardiac region, the thickening and induration were greatest. Indeed, the whole stomach exhibited one schirrous mass. There was however no induration perceptible during life, nor was much uneasiness ever felt on external pressure. The cardiac orifice would hardly admit the little finger. I traced the cesophagus upwards, dissecting it carefully, but no constriction whatever

remained at its upper part. In laying open the thick parietes of the stomach, I was surprised at the small cavity remaining; I do not think it was capable of containing six ounces. Thus the regurgitation may be accounted for. The omentum was tuberculated and thickened. The liver, lungs, &c. were not diseased. About two quarts of serous fluid were found in the cavity of the abdomen."

CASE 9.

Stricture, partly Spasmodic, in the Œsophagus.

September, 1821. I was consulted by Mr. S. a gentleman aged thirty, who for some time had felt uneasiness in the back part of his throat, and latterly an impediment and considerable difficulty in swallowing; particularly any thing solid. He fancied it some approaching affection of lungs, as he thought he felt it affect his breathing. It was however, never painful. On examining the part, a large sized silver ball would pass only to the lower part of the pharynx; one, a quarter of an inch in diameter, with some pressure slipped through and found no obstruction or irritability beyond. By the instantaneous transit of the instrument, and the sensation conveyed by the resistance, I had no difficulty in giving a very favourable opinion, considering the affection to be partly spasm, and confined to a very small extent of the tube; and that in all probability the occasional introduction of a bougie, would soon effect its removal.

The œsophagus-bougies which I prefer, are those manufactured by Mr. WEISS, of elastic gum, with a copper wire in the centre, to enable the instrument to keep the convenient curve. One of these bougies was passed every two or three days, for five or six weeks; when the largest size passed with perfect ease, and further treatment was unnecessary; particularly as he found his complaint quite removed, as far as regarded his own opinion. The only

observation as to the above mode of procedure worth mentioning is, that in introducing the instrument I was always obliged to wait two or three minutes at the stricture, till a short fit of coughing occurred, this was always immediately followed by comparative relaxation of the stricture, when with the least pressure the point of the bougie passed quietly through, and excited no further disturbance.

March, 1825. This gentleman remained well.

CASE 10.

Schirrous Disease of the Inferior Part of the Œsophagus, inducing Spasmodic Stricture.

Thomas Chubb, aged 66, applied for relief, at the St. George's Infirmary, *May, 1817*. For the last six months he had felt increasing inconvenience in swallowing, till it was now with extreme difficulty that he could get down a spoonful of water. The only pain he had felt was that of hunger. He often said he could have enjoyed the coarsest food, if he could only have got it down; a circumstance which argued that the functions of the stomach at least were unimpaired.

Requested to swallow a little water, it was observed to pass only to the lower part of the pharynx, exciting a kind of regurgitating effort, with cough; now and then a little of the fluid passed the contracted part, when he said he felt as if it stopped a few minutes at the pit of the stomach, whence it almost invariably returned upwards.

A bougie of moderate size passed into the throat, ascertained a contraction at the upper extremity of the Œsophagus, through which an instrument of smaller diameter was with some difficulty introduced. This operation was occasionally repeated, enabling him at times to get a small quantity of milk, or broth, into the stomach; and these means, assisted by nutritive injections, kept him alive.

May 29. He died, in extreme emaciation; and it was remarkable that till within a few days of his dissolution, he had never perceived the least obstruction at the lower end of the œsophagus.

On examination, I found the œsophagus at its lower part thickened, and compact. At the cardiac orifice of the stomach it had all the characters of tuberculated schirrus. The appearance of the cavity of the stomach and œsophagus was partially concealed by a stiff ropy mucous matter, which in the stomach was yellowish, and mixed with a little water, which it was said he had swallowed with surprising ease, just before his death.

There was no trace of contraction remaining at the upper end of the œsophagus. Two inches below this point, the first appearance was a perceptible thickening and opacity of the mucous membrane, as from preceding inflammation. This appearance extended down to within four inches of the cardia, where the schirrous thickening of the muscular coat very gradually commenced. The thickness of the diseased part was one sixth of an inch, and of this thickness the disease was evenly extended down to the cardia, where a tuberculated structure had presented an insurmountable obstacle to the passage of contents. At one part the disease at the cardia was ulcerated internally.

In the above case it may be presumed the primary affection must have been at the cardiac orifice of the stomach; although the earliest observable effect, or symptom, was spasm at the opposite extremity of the canal.

CASE 11.

Schirrous Stricture, in the Œsophagus.

June 14, 1817. J. Murray, a bricklayer, aged 40, applied for relief to the St. George's Infirmary. Three months back he had felt uneasiness and pain

between his shoulders, and about that part of the spine. Several weeks after this, he perceived a difficulty in swallowing, situated in that part of the œsophagus opposite the top of the sternum. He soon also found inconvenience from a copious secretion of ropy mucus, temporarily relieved by the occasional rejection of a quantity of glairy viscid mucus, from above the obstructed part.

Latterly the great distress had been a pain in the part, compared to that from "a red-hot poker boring through the back night and day;" with occasional shooting pains, so intense as to excite sudden flushes of heat, and profuse perspiration.

Bread and milk, in pulp, he said he was just able to squeeze down with his finger and thumb, pressing externally.

A hollow bougie, half an inch in diameter, was passed eight and a half inches (measuring from the upper incisor teeth); but violent irritation was the only immediate effect of the operation. The pain and difficulty in swallowing remained as before.

June 15. The operation was repeated, and the instrument passed into the stricture.

June 20. So much relieved as to swallow with ease bread and milk, and other soft solids, without pressure, difficulty, or cough. The pain also in the back and stricture, he said, was nothing in comparison with what it had been. He was so sure the operation had relieved him, that he was urgent to have it repeated; but this it was thought right to postpone.

July 15. He was now bad as ever, the pain even more acute than before. He was directed to lose some blood, by cupping upon the chest. To keep the symptoms in check, he was placed under the permanent influence of opium, and hyoscyamus.

August 23. Much worse, and unable even by external pressure, to force down any thing but milk. Symptoms and treatment as before.

September 9. I had lately passed the hollow bougie twice, down to the stricture, in the hope of lessening the contraction; but without any immediate appearance of relief.

September 16. He was certainly again enabled to swallow with much more ease, he could now take down thick-milk with ease, and without pressure.

October 14. Complained of a very heavy cough, and great pain in the left shoulder; with occasional distress, as from something rising in his throat.

The constitution was now rapidly giving way, under the combined influence of severe pain, and distressing irritation; white tongue, small pulse at 120, and the most extreme debility.

October 19. This poor man's sufferings were happily terminated by his death; but as leave was not obtained for examining the body, the exact extent of the disease could not be satisfactorily determined.

CASE 12.

Dyspepsia; inducing alarming Affection of the Head.

Mrs. D. a lady aged 36, requested my opinion, in *March 1823*, for complaints which, she said, had crept upon her slowly and imperceptibly, till her family as well as herself felt uneasy under any further neglect of them. Her appetite had not for years enabled her to take, in her opinion, what was sufficient for her support, and, owing to this circumstance she thought, she had found herself for years gradually losing strength. Her bowels also, from defective appetite, or otherwise, had long been prone to confinement, and for years almost entirely dependent on medicine, without which they were scarcely ever moved.

The circumstance, however, most distressing was, that of late she had become subject to gid-

diness and confusion in the head when walking in the street, with sensations of fulness, which alarmed her family extremely. Afraid of venturing out alone, sometimes obliged to stop, and lay hold of rails to avoid falling, after the most gentle exercise; she could not help feeling considerable uneasiness.

She proposed losing blood by cupping, or otherwise; although the pulse was soft and quiet; and the tongue clean. I therefore preferred first directing medicines, to bring the stomach and bowels gradually under a tonic and aperient influence; the effect being narrowly watched. It happily proved to be all that was necessary. The medicines were continued for two or three months, and as the dyspepsia and its other consequences were alleviated, the distressing feelings within the head imperceptibly diminished, and altogether disappeared; and when medicine was at length laid aside, the stomach continued to perform its functions, and the bowels to perform their duty, with more alacrity, and comfort to the patient's feelings, than they had done for many years before.

CASE 13.

Dyspepsia, with constitutional Ill Health, from Derangement in the Gastric Secretions.

July 19, 1824. I first visited a gentleman, aged 30, for many years subject to occasional attacks of acid eructation and vomiting, coming on and returning whether the stomach was full or empty; continuing a week or two, and then leaving him comparatively well for several weeks, or even months. For the last four months also, subject to a very uneasy feeling in his right side, near the short ribs, in the region of the duodenum. He had lately visited Dorsetshire, for his health, and on his return to Winchester was attacked in the usual way, and threw up a considerable quantity of

acid slime, of a brownish colour, with little effort ; the bowels then confined, were generally regular. The appetite always delicate, and for many years deficient, was commonly in these attacks quite destroyed.

His constitutional health had, of course, suffered. Eight years back, when the state of his stomach was much the same as at present, he was under a physician's care for a swelled gland in the neck, which gathered, was opened, and was six months in healing. He subsequently was recommended to visit a milder climate to benefit his health, and had, with this view, been two voyages to the West Indies ; but although better, his complaints continued, and within the last year another gland had enlarged and suppurated in the neck. Pulse 80, and soft. Tongue clean, but rather white. The first object, as it appeared to me, was to clear out the bowels, for which purpose he was directed an occasional aperient.

July 27. Bowels relaxed, pain in the right side much relieved, but felt low from the medicine. A mixture was next directed, consisting of compound decoction of aloes, sulphate of soda, and magnesia ; to prevent the recurrence of acidity, as well as obviate costiveness.

August 1. Not so well. Much annoyed by an occasional sense of vibration or beating, commencing in the vessels of the neck, and proceeding thence up to the head, with a feeling of distressing fulness of blood in the head, sometimes even a degree of temporary giddiness. This he partly attributed to the weather having become cold and damp, which never agreed well with him ; while the last prescription seemed to have excited irritation and fulness about the lower bowel. Compound decoction of sarsaparilla ℥vi. and lime water ℥ii. , were now ordered in a mixture. Four table-spoonfuls to be taken every morning, with an occasional dose of Epsom salts.

August 14. Still some inconvenience from the

beating and fulness in the head, and had been anxious to lose blood, which necessity was happily avoided. The medicines were requested to be continued.

August 30. Some return of acidity, pain and fulness in the right side, and confined bowels; I therefore determined to combine the aperient with the other medicines; for this purpose he was directed compound decoction of sarsaparilla \mathfrak{z} vi., liquor potassæ \mathfrak{z} ij., infusion of senna \mathfrak{z} iss., tincture of senn. \mathfrak{z} ss., extract of sarsaparilla \mathfrak{z} i., in a mixture; three table-spoonfuls to be taken three times a-day.

September 20. Had taken his medicine regularly. Acidity, uneasiness in the side, and headache, all removed; and as to the bowels, there was so little remaining inactivity that he had regularly two motions daily, and was, in fact, rather losing flesh, although all his complaints were essentially better, and his appetite much improved. He was consequently in excellent spirits. Under these circumstances, he was requested to continue the same medicine, but varying the manner; taking it once or twice daily, so as to secure one easy evacuation each day, and that only.

October 4. The medicine had been regularly continued. He now said he had lost all his complaints; his appetite, good spirits, activity, and strength restored. He was notwithstanding requested to continue his medicines, at least for a month or two longer, which with some reluctance he promised.

CASE 14.

Dyspepsia, from Intemperance.

May 2, 1820. I was requested to see Mr. H., aged 40, a publican, many years addicted to drinking spirits. He complained of total loss of appetite, confusion of mind, occasional sallies of deli-

rium, extreme irritation, white tongue, and rapid pulse. No steady, severe, or acute pain in the head, but a constant sense of uneasiness.

In relieving the above complaints, experience had taught me the most effectual means were medicines containing opium, so directed as to keep up an anodyne influence. His family at first expressed some surprise at the apparent want of activity in the proposed treatment; observing that in a former similar attack (of which he had had several) he had been bled, cupped, and blistered repeatedly, and that notwithstanding all this it had been necessary to confine him in a strait waistcoat for three months, in a state of insanity. He was now, however, restricted to a quiet diet, with abstinence, for the present, from all fermented liquors.

May 11. His mind now steady and collected; whereas lately he could not even in the day look hard at the wall, without fancying and believing he saw figures moving and coming out of it. His nerves, previously shook by perpetual tremors and agitation, were now firm and established; although even yet, at night, he could not look steadily at the wall or curtains of his bed, without imagining he perceived something particular, but this gave him no distress, as he now knew it was only fancy. His head, he observed, was also much less giddy, and more composed, though he had still occasional flashes of light pass before his eyes, nothing, however, in comparison with what they were. His appetite, he observed, was perfectly restored, although till lately he could not eat, nor even endure the sight of food.

May 24. So much stronger and better, that although he occasionally felt what he termed "common headache," he could fix his eyes at any time, for any time, upon an object, without fancy intruding its images to his vexation or annoyance. For the last week, he had been twelve hours a-day in his business. He now took twice a-day a draught,

containing compound tincture of bark ʒiss., tincture of opium gr^{ss}. x, with camphor mixture ʒviij. He was requested to continue his medicines a week longer, and then lay them aside.

Nov. 14. I was requested to call, and found him sitting with his head in a corner, perfectly sensible, but little disposed to describe the severe pain in the back of his head, now his chief misery. As to sleep, he said sometimes he could not keep his eyes open night or day, but at others he could not get a wink of sleep through the whole night or day. Pulse 112, and small. Complained of constant coldness of legs, and shewed me his left hand, livid and puffed up with œdema, as it frequently was. Stomach rejected every thing, soon as taken. Finding, upon trial, that the plan adopted in *May* would not answer now, a gentle aperient was directed, with a blister to the neck.

November 16. Better in the head, bowels relaxed. The legs less cold than before. Directed the aperient to be repeated. It was curious that there was now no trace of the former tendency to mental illusion.

November 20. Delirious, and wandering about the house all night, to the extreme distress of his family. He was now soon restored by directing him an opiate alone, to be repeated at short intervals, which, in a week or ten days, brought him quite round again.

September 1821. After having for several months, in consequence of increased intemperance, relapsed into his former state, while sitting as if asleep, I was informed he fell forward and struck his head; the poor man however got up, but complained little. A night or two after, he seemed rather worse, and, almost before his wife and family were alarmed by the apprehension of the event, he expired in his bed.

It is to be regretted that the friends would not permit any examination to be made after death.

CASE 15.

Dyspepsia, from Intemperance.

November 12, 1818. I was requested, by my friend Mr. BARROW, to examine the body of a robust man, Mr. B., aged fifty one; long addicted to excess in drinking. In *June* preceding, he had total loss of appetite, great irritation, and so violent delirium, that his attendant thought it necessary to bleed him largely, though without relief. By temperance and opiates however he was soon recovered.

November 6. Mr. BARROW had been sent for, and found that by the advice of a pot companion, who practised pharmacy, he had been cupped, but thought himself the worse for it. He admitted he feared seeing Mr. BARROW, knowing he would restrict him, or in his own words "keep him low," while his previous attendant kindly allowed him all that he liked, and whatever he chose to drink. He was directed opiates at short intervals, and of course to take no vinous or spirituous liquors.

November 7. He was visited by Sir W. K. in consultation; and as he had been attacked by convulsions in the night, of an epileptic character, or as it was suspected apoplectic, he was bled to $\frac{3}{4}$ xx. after which he was more tranquil, but the pulse was weaker though it remained at 90, as before; he thought himself rather worse than better, for the operation. The anodyne system was continued.

November 8. In the morning more tranquil, he certainly appeared better, but in the afternoon, was again worse in every respect. In consultation he was directed half a grain of opium every six hours, but was the following night so ungovernably delirious, that six people could scarcely keep him in his room. He raged with furious efforts to escape, calling robbers, and thieves. The delirium

was sometimes roused and violent, at others sunk into comatose quietude.

November 9. When the physician saw him, he observed "we have here an accession of phrenitis." The head was accordingly directed to be shaved, a blister laid over it, and cold lotions applied to the forehead. During the afternoon he was quieter than before, but at six P. M. died.

November 12. On examination, I found the large veins of the pia mater very full of pale watery blood, and numerous globules of air. There was very little visible character of inflammatory excitement; and only a very sparing serous effusion here and there beneath the arachnoide membrane. In the lateral ventricles near $\frac{3}{4}$ i. of serum was collected, on each side; but in structure the brain was perfectly sound.

CASE 16.

Dyspepsia from Drinking.

March 5, 1820. Through the kind attention of Dr. YEATS, I was desired to examine the body of Captain G. aged 42; a very heavy and corpulent person. This gentleman, who had been many years abroad, principally in the West Indies, was said to have been through life of an obstinate and self-willed temper, and addicted to drinking; by which his intellects were impaired, and latterly his appetite and health; his memory and other faculties, destroyed. A few days before he died, he was stated to have vehemently abused his servant man for breaking a pane of glass, which so far from being broken, had not been injured.

On examination, the tunica arachnoides was found separated from the pia mater, by serous effusion upon the upper, but not the lower, surfaces of the cerebrum. The arachnoide membrane had also numerous small pearly opaque spots, upon those parts raised by the effusion of serum. About $\frac{3}{4}$ iij. of

a similar fluid was contained in the ventricles. The veins upon the pia mater were loaded with the same peculiarly pale and attenuated fluid, scarcely resembling blood, noticed in my other examinations of this disease.

CASE 17.

Dyspepsia, from Intemperance.

June 7, 1819. I was desired to see a kind friend, Mr. J. aged 49, whose health, from the habit of drinking spirits, was nearly destroyed. Appetite quite lost, he had not the power of retaining a particle of solid food, and could only take spirits and strongly spiced liquors. From debility and high irritation of system he had been for many months incapable of attending to business. For the last month his memory failed exceedingly, and for a week or two he had complained of strange feelings with giddiness, in his head, and occasional delirium. Skin dry and warm, tongue covered with dry brown fur, pulse small, weak, at 130; bowels relaxed.

He was directed a tonic mixture, first alone, and then combined with an opiate. A dessert spoonful to be given occasionally; fluid nutriment to be also administered in the same manner, with total abstinence from all fermented liquors.

June 9. His last medicines had at first induced dosing and starting from frightful dreams, with apprehension that he should kill his wife. During the night, however, he had got into a general and free perspiration, which continued the following day. The medicines, and diet, were continued.

June 10. Already so much better, that he could take beef tea very well, and even eat a little; tongue fast clearing, and pulse down to 90. Desiring this plan to be continued a week longer, I took my leave. Advice and restriction useless,

being a man of positive temper, he returned to his old habits, and soon sunk back from perfect recovery into his former state. His mind generally rational, sometimes rose to a state of excitement bordering on fury, at others wandering for weeks under illusions that nothing could dispel, regarding the bank; and a belief for many months that he could not stand. He frequently felt his limbs weak, numbed, and cold, especially the right hand and fingers.

The evening before the morning of his death he had been talking with Mr. ROBINS the celebrated auctioneer, on business, who very properly and earnestly enjoined his seeing Dr. HOOPER, but he said he should postpone it. He passed a restless night, and the following morning said he would endeavour to get a nap, and soon afterward, without any perceptible pain, breathed his last; *November 26, 1819.*

November 27. On examination, I found a pretty general effusion of serum, between the tunica arachnoides and pia mater, especially towards the basis cranii. The lateral ventricles were enlarged; and contained near $\frac{3}{4}$ ii. of serum. The structure of the cerebrum was sound, but that of the cerebellum rather softer than natural. The left vertebral artery near its junction with the right was thickened in its coats, and in progress towards ossification. The blood in the veins upon the pia mater was so thin as to have the appearance of water slightly tinged with blood; containing also large globules of air.

In the chest, and abdomen, the only appearance of disease was in the liver, which was in texture changed throughout, though not enlarged. The disease seemed to consist in a granular deposit, of a whitish colour, tinged yellow from bile; the structure being more compact and firm than in health.

CASE 18.

Dyspepsia, with Chronic Inflammation of Stomach ; from Drinking.

Mr. B. aged 45, a gentleman unhappily addicted to drinking spirits, and subject to attacks of pain and sickness at stomach for 15 years; had consulted various physicians, with little benefit. In 1808, he was attacked suddenly with violent sickness and vomiting, when he thought himself well; it was supposed bilious, though he always regulated his food at least, with great care. His bowels regular, and health otherwise good, he was sent to the sea side, under a restricted diet.

The period of attack, quite uncertain, was commonly preceded for a day or two by a distressing burning heat at stomach; sickness then came on, and whether the stomach was full or empty did not seem to influence it at all. It usually continued two or three days, or a week; better for a day or two, then worse again. Stomach at times tender, externally; habit of body generally confined; though the severity of the attack seemed relieved by gentle action of the bowels. Still, the least thing would operate, sometimes too severely.

For the last two years these attacks were much more frequent and severe, attended with feverish symptoms. Always relieved by change of air, he on one occasion paid a visit to Scotland, for some months, and for all that time, and for six months after his return, remained free from sickness and pain; but this was the longest interval.

In his last attack, he was on the Friday well and in good spirits, and walked for an hour extremely well. The next day, the violence of pain in the stomach prevented his taking any dinner. He felt chilly and cold, and said he feared he should have spasms at the stomach, which he had heard were dreadfully painful. In the afternoon he felt

sick, and expected he should then soon be better. His feet were immersed in warm water, a remedy to which he had been accustomed.

Dr. HOOPER, who for the last ten years had invariably been his physician, having unfortunately been sent for out of town by express, to attend a consultation, Dr. AGER visited him, with myself. His pulse, at 120, was small and weak; skin hot, and tongue white; with complaint of great pain and tenderness at the stomach. Mild saline and diaphoretic remedies were directed; with a blister to the pit of the stomach.

On the *Sunday* morning, his medicines having been rejected, he had sunk into a state of insensibility, alternating with slight convulsions, in which he remained through the day; and in the evening died.

The following day (*August 10, 1818*), in the presence of Dr. AGER, I opened the body. The stomach scarcely at all discoloured externally, appeared and felt thicker than natural. Removed from the body, the stomach was laid open, along the lesser curvature, where although no part felt schirrous, the thickening was most remarkable. In doing this, the knife was covered with pus, and it appeared that purulent matter, coagulable lymph, and serous fluid had been universally effused into the cellular tissue, between the villous and muscular coats of this organ. In some parts the effused matter was pus alone, in other parts it appeared to be almost pure coagulable lymph, tinged yellow, but with scarcely a trace of pus, while here and there minute vessels were seen shooting into the lymph. Behind the large longitudinal rugæ of the stomach the appearance was that of a relaxed and transparent œdema, rendering each fold of the inner membrane large and full.

The average thickness of the coats of the stomach was one-fourth of an inch; on its external

surface the only morbid appearance observed, was a few small inflammatory specks.

The rest of the abdominal viscera were sound.

CASE 19.

Spasmodic Pain at the Stomach ; from Disordered Bowels.

May 11, 1820. Miss S. aged 36, was attacked with violently severe pain at the pit of the stomach. The part felt extremely tender to external pressure. The sensation was peculiar, it was that of being tight girt, or held fast, at the stomach. There had a fortnight before, been some disorder of bowels, for which she had sought relief by taking aperient medicines; the relaxation had subsided, but the pain at the stomach remained, and was occasionally very severe. She had been frequently subject to the above complaints for the last five or six years.

The accession of the pain was not instantaneous, but was generally preceded by chills and faintness, that came on some time previous to any uneasiness in the stomach.

A mild aperient occasionally repeated, operating well, enabled me to direct with advantage some decoction and tincture of bark, first with an opiate, then alone, and eventually in combination with an aperient salt, which she was requested to continue. Perseverance in this plan very soon removed her complaints, restoring her to a better state of health than, according to her account, she had enjoyed for some years.

CASE 20.

Gouty Spasm at the Stomach.

July 12, 1821. I was desired to visit immediately Mrs. G., a lady aged 63; many of whose

family I had before attended, on various occasions I found her lying forward in bed, groaning with agony of pain in the stomach: the attack, said to be gouty, was attributed to eating new potatoes. She was directed to drink some hot spirits and water, until Dr. N., her former attendant, should arrive. The stomach rejecting this mixture, I ordered succinated spirit of ammonia gtt. xxx. and cinnamon water \mathfrak{z} i. in a draught, to be given directly. This, though also rejected, was followed by immediate and very complete relief. Her physician coming into the room, I took my leave.

The next morning at 7 o'clock, I was suddenly called, and found her in renewed distress, from extreme pain at the stomach. A cathartic pill had been ordered to be taken every hour, till they operated upon the bowels, and nine had been taken with scanty and partial effect. The Dr. promptly visited her; and as she had for a few minutes felt giddy, proposed bleeding; this, however, with a failing and weak pulse and constitution, appeared to me less probably the effect of congestion than of severe pain; and as the violent paroxysms of pain had shifted from the stomach to the bowels, the operation was postponed. We agreed to meet again at 3 P. M. Extreme pain and anxiety still existing at the præcordia and loins, with a skin cold, shrunk, dry, and bloodless, or warm, relaxed, and profusely perspiring, the Dr. said he could not feel satisfied that he had done his duty, unless he had some blood taken; we therefore agreed to have \mathfrak{z} vi. taken from the neck, by cupping. The pulse, before fluctuating from 120 to 140, remained after the operation much the same. A strong mixture with oil of cinnamon and of mint, with some syrup in camphor julep, was now ordered; which she took with relief and comfort. Towards evening she became more anxious, and had a restless night.

July 14. The day was passed in increasing corporeal anxiety, pain, and restlessness; respiration laborious; pulse, faltering and unequal. These changes continued to proceed through the night; and on the following morning this exemplary lady breathed her last; so much more lamented than lamenting, that while several of her numerous family around her were senseless with grief, she never even for a moment lost sight of her duty; but remained to the last a pattern to her children, for whose future welfare she scarcely once permitted herself to express either anxiety or care, feeling, as she said, that it was a God full of mercy in whose charge she was about to leave them.

This lady, I was informed, had been subject to regular attacks of gout for some years, and on one occasion, about three years previous to her decease, had a similar attack of excruciating pain at the stomach, said to have been immediately and effectually relieved by taking a strong medicine prescribed by her physician; directly after which a regular fit of gout came on in the foot.

CASE 21.

Gouty Spasmodic Pain at the Stomach.

March 27, 1823, 7. P. M. I was requested to visit W. B., aged 30, whom I found labouring under violent pain at the pit of his stomach, which two hours before had increased, till he fainted and remained senseless for a quarter of an hour. The skin cool and moist, was at the height of the paroxysm bathed in a cold sweat. Misfortunes, poor living, and rheumatic gout were the supposed causes of the complaint, to which he had been before subject. The pulse at 34, was small and soft. Bowels regular. He was directed decoction of bark, ℥iij.; mint water, ℥iiij.; tincture of casca-

rilla, ℥i. ; Epsom salts, ℥ij. in a mixture. Three table-spoonfuls to be taken every morning.

The above attack had been preceded by three weeks' gout in the toes, ancles, and knees. This subsided, and entirely left him, when the spasm came on at the stomach, and occasionally returned for a week previous to my seeing him. The medicines above directed appeared to be useful, as the spasm did not return. After a week's interval, however, he had a return of gout in his knees and hands, by which he was again rendered helpless for the space of seven weeks.

August 11. The gout had returned in his knees and feet, but there had been no return of pain at the stomach ; although his appetite and digestive powers were very deficient.

CASE 22.

Dyspepsia ; with Spasmodic Pains, and Affection of Liver.

Mrs. M. aged 54, applied to me *September 2*, 1822. Her complaints were loss of appetite, and excruciating pains in the bowels, most frequently waking her from sleep, with violent bearing down, desire to pass a motion, and cold perspiration. Stools deficient in quantity, generally black or greenish in colour, and frequently containing blood. She was directed tonic medicines, with a very gentle aperient power ; and requested to take light nutritious diet, in small quantities at a time, abstaining entirely for the present, from fermented liquors. Under this treatment, she soon improved.

September 9. She called upon me, and said that her stomach was good, and her bowels moved with ease and comfort, once daily ; had not been so well for several years as at present. She was requested to continue her medicines.

September 16. She had perfectly recovered.

December 1, 1823. Again very ill, with total loss of appetite, yellow tinge upon the skin, costiveness, furred tongue, and quick pulse. An aperient, however, some mercurial pills with opium; and, lastly, a light tonic; soon brought her round again.

September 27, 1824. Had just returned to town, very ill. Complained of violent pain, like spasm, at the pit of the stomach; "as if the stomach was squeezed fast in the hand." This sensation was so much aggravated upon taking the least particle of food, that for the last eight days fear had prevented her touching a morsel, and she had consequently eaten nothing. There was decided tenderness, on external pressure; with a deep bilious tinge upon the skin, and furred tongue. Mercurial medicines, with occasional aperients, were again had recourse to; the pain, however, continued so severely that leeches, fomentations, and a blister were afterwards prescribed.

September 30. The severity of the symptoms so far moderated, as to admit the direction of some vegetable bitter infusion; and soon after the more direct tonics, with a slight aperient power; the mercurial pill being occasionally repeated. In three weeks, assisted by the above plan, she was again quite restored. The appetite strong and good, the bowels acting regularly, all sense of uneasiness at stomach gone, as well as the bilious tinge of skin. She, in short, found herself well, and medicine was consequently discontinued.

CASE 23.

Dyspepsia, from Affection of Liver, and obstructed Gall-bladder.

R. N., aged 36, was at 16, through cold, confined to bed, with total loss of appetite, violent pain in the head, and fever. This attack was succeeded by

jaundice. In three weeks, by proper care, it subsided, he became better, and perfectly recovered.

At 31, he went out to Madras, in the 84th foot, and the following season was attacked with pain in the right side and shoulder. In hospital six weeks, he was bled, purged, and blistered. While in hospital, some degree of hardness was perceived on the right side, but by a blister to the part, and medicines internally, it disappeared.

Twelve months after this attack, he went up the country to Bangalore, where he lived chiefly on curries and dried fish. He now found his health again give way, his legs became œdematous and ulcerated; for three years his legs remained ailing, generally ulcerated, but never perfectly reduced in size.

In *November* 1815 he was invalided, and the following year sent home; reaching England in *July*. About the middle of *October* he again felt his appetite decline, with internal uneasiness in the region of the liver, soon increasing to pain, with a sensation of "inward swelling." These symptoms continued till *November* 28, when a degree of external swelling at the pit of the stomach beneath the right rectus muscle becoming apparent, he was taken into the St. George's Infirmary, and the part fomented.

December 1. The hardness of circumference, with a central softness, rendered more distinct, Mr. HEAVISIDE deemed it proper to make an opening through the integuments into the cavity; this was done with an abscess lancet, and about ʒij. of a thin yellowish serum, with a little pus and blood, were let out. Subsequent to this period, it for many weeks discharged only pure bile, giving a bright yellow stain, and having the peculiar odour of bile, of which several ounces were generally poured out in the twenty-four hours.

In the latter part of the *February* following, the appearance of the discharge altered, no more bile

escaped, but only a grumous fluid like venous blood, as if mingled with the ulcerating substance of the liver.

February 23. Discharge very moderate, not half an ounce in the day. Strength and appetite almost entirely restored.

February 28. Much improved in vigour, and recovering fast in flesh. Discharge scarcely to be perceived.

March 15. Entirely recovered; he requested Mr. HEAVISIDE's permission to leave the house, and was accordingly sent out.

June 10. I met this man in the street, much improved in flesh and appearance. He acquainted me he was now in the habit of walking many miles a-day, with pleasure and profit to himself and family, and said he felt very thankful for his restoration to health.

CASE 24.

Dyspepsia, from Biliary Calculi.

October 8, 1824. I visited a lady, for more than twenty years troubled with affections of stomach, always connected with deficient appetite, and frequently great pain; referred to biliary calculi, which had occasionally been found to pass with her stools. The attack usually commenced with a sudden accession of agonizing pain, as if all the bowels were twisted together, with sickness and most severe vomiting, and occasional yellow tinge of skin. The pain in the attack always seemed to arise in the same point, the region of the gall-bladder, spreading and extending thence to the stomach, and over the abdomen. In these attacks she often remarked, that however severe the straining and sickness might be, no bile appeared, a circumstance characteristic of the nature of the complaint, as derived from obstruction of the biliary ducts, by the

passage of a calculus. For some years she was rarely a month free from the return of this disorder.

In *September* 1822, the most violent attack occurred. The powers of the stomach on this occasion were entirely destroyed, and she was excessively reduced by severe pain, straining to vomit, and want of ability to take nourishment. For near three months the above symptoms returned upon her, with more or less violence, every second or third day. The treatment, bleeding, mercurial alteratives, and fomentations, of which she found the latter the most useful. During this illness, many small calculi, like peas, were found in the stools, and some few of larger size. By the continued use of the mercurial pill, the system was at length brought and kept under its influence, some weeks, after which she again recovered. When comparatively well, however, she remained subject to pain in the left side; and if, while reposing on that side, she happened to cough, she was obliged to turn directly over, as it created an acute, and “pulling sore kind of pain.” With this sensation she had sometimes awoke in great distress.

March 3, 1825. I was requested to see this lady in consultation, with Mr. STUART. For the last month she had laboured under extreme tenderness and pain, with almost constant vomiting, which rejected both food and medicine. The tongue was foul, the pulse soft, at 60. The skin, urine, and stools, were all tinged with bile. She had taken the mercurial pill, with cathartic extract. The same pill was now directed, combined with opium; a poppy head fomentation with camphorated spirit being ordered to be applied to the pit of the stomach; when the pain should prove violent. All nourishment to be given by a table-spoonful at a time: under this plan, although she had been considered in much danger, she happily improved; and in the course of a fortnight recovered; after void-

ing with her stools seven or eight biliary calculi, most of them the size of a large pea.

This lady, it may be remarked, was sister to the subject of Case 25.

CASE 25.

Dyspepsia, with fatal Confinement of Bowels ; from Gall-Stones.

June 27, 1823. I was requested to see Mrs. J., aged 52 ; for some years subject to attacks of most severe pain in or about the stomach, with bowels usually confined. These complaints were relieved by mercurial aperients, or gentle tonics, with saline aperients. Her constitution bilious and nervous, and her mind too sensitive to every impression of anxiety and care. I found her complaining of violent distress and pain at the pit of the stomach, like a great weight, rendering her frequently sick, and sometimes faint. The bowels of late had been very relaxed, and irritable. She observed she had for many weeks been unwell, extremely low, and totally without appetite. Countenance pallid and sunk ; pulse, 60 : compound infusion of gentian, \mathfrak{z} v. ; decoction of bark, \mathfrak{z} ijss. ; compound tincture of bark, \mathfrak{z} ss. ; Epsom salts, \mathfrak{z} i., in a mixture were directed. Three table-spoonfuls, night and morning.

June 28. The medicine at first rejected, was afterward kept down, and she had been able to take some beef-tea ; but could yet eat nothing. The pain at stomach was much relieved, and "not near so violent as before." The pain was described as having partly moved down to the right side, near the seat of the head of the colon. The region of the stomach was however, still very tender on pressure. Bowels once moved.

June 30. A light tonic medicine combined with the compound camphor tincture, had proved very

useful, raising the pulse up to 90, with a glowing healthy colour and feel upon the skin and face, with warm perspirable relaxation. No remaining uneasiness, but soreness, at stomach. The pain in the right side less than yesterday. Bowels freely moved.

Being now sufficiently recovered to attend to her business, she was advised to lay aside medicine.

March 14, 1824. This lady was seized with violent and terrible pains fixed at the pit of the stomach. Bowels two days costive, but previously quite easy and regular; skin cold and bloodless; pulse small, at 50. Aperients failed, opiates and other medicines were rejected, and she continued groaning with extreme pain. These symptoms continued through the following day; in the evening a warm bath was recommended, but she felt so weak that she neglected to use it.

March 16. In addition to the aperients, a laxative injection was administered to little purpose; an opiate embrocation to the seat of the distress procured some relief, and sleep. Pulse small and 80; skin warm; tongue clean. The matters thrown off the stomach were extremely bilious, and somewhat stercoraceous. A perpetual restlessness and anxiety were now added to the former alarming symptoms.

March 18. Her situation became every hour more hopeless. It was clear that, from whatever cause, nothing would pass the bowels, or stay on the stomach. The vomiting was little else than fluid fœces, and the glysters only washed out the lower bowel. Effervescing draughts were directed, and not immediately rejected, although the stercoraceous vomitings still continued to return. Her family, from the first apprized that her state was extremely precarious, now proposed consulting Dr. HOOPER; in the conviction that if the case yet admitted a favourable turn, he was of all persons most likely to bring about the desired change. Dr.

HOOPER's opinion, however, coincided too perfectly with my own, to admit of much hope. The medicines were varied, but the fæcal vomitings continued.

March 19, 10 A. M. Fancied herself better, but during the day she at one continued effort threw up more than three pints of offensive fæcal fluid from the stomach. Towards evening, seized with sudden and severe cold sweats, followed by coldness of the extremities, she became herself convinced she was dying; and about midnight expired.

March 20, 6 P. M. On examination, the stomach was found contracted towards the pylorus, that opening being nearly closed; otherwise, the stomach was healthy. In structure, the liver was healthy, but at the point opposite the gall-bladder, a part of the omentum, with the commencement of the duodenum, were closely adherent to the fundus of the gall-bladder, and surface of the liver; from inflammation.

Upon laying open the stomach and duodenum, a large ulcerated and ragged opening in the bowel appeared opposite the adherent gall bladder, by which opening the finger freely passed into the latter cavity. The gall-bladder, thickened and contracted, still contained a small biliary calculus, confined at the bottom of its cavity by a partial contraction of its coats.

The whole extent of the duodenum and jejunum, considerably enlarged and excessively vascular from preceding irritation and distension, were nearly filled with fluid fæces, similar to that rejected by vomiting. By tracing the course of the bowels downwards, it was discovered that at the termination of the enlarged part of the intestine, a biliary calculus of very unusual magnitude, was fixed. This calculus, a flattened oval, was two inches in length; and one inch and a quarter in its greatest diameter; weight, 440 grains; surface, rough; colour, pale brown.

Here then, was the cause of all the preceding symptoms and sufferings. The presence of this calculus had excited inflammation, adhesion, and ulceration, by which it had been enabled to make its escape through the fundus of the gall-bladder, into the duodenum; and by the irritation produced in the bowel, as well as by the efforts to vomit, was afterward driven along a very considerable extent of intestine; although nature at last sunk in maintaining a struggle, to which the constitutional powers were unequal.

CASE 26.

Dyspepsia, in consequence of Disease, including the Stomach.

March, 1821. By Dr. HEAVISIDE's kind attention, I had an opportunity of seeing a case in which he met in consultation Dr. MERRIMAN and the late Mr. CHEVALIER. The patient was a poor woman, aged 52. For two years there had been a progressive swelling of the abdomen; and at one time, from her having felt the same sensations of uneasiness and cramp, with the same declension and total loss of appetite, she had formerly experienced when pregnant, she was quite sure that had been her state on the present occasion. Latterly however, in addition to the above symptoms she became highly jaundiced. There had also existed for many months a moveable, elastic, firm tumor to the right of the navel, which from the obscurity of the case and symptoms, had led several persons who had seen her to suspect the existence of an extra-uterine conception. This tumor, when examined, gave her no pain. Some had advised its being opened, others had dissuaded her from it. The poor woman herself, desirous of relief, and confident in hope, earnestly desired an operation might be performed. Fortunately, neither of the above gentlemen were disposed to think favourably of an operation, and

the idea was relinquished. Pulse quick, with some degree of irritative fever.

Within a fortnight she died, and I was requested to open the body. The same elastic feel of tumor still pressed up the abdominal parietes. On laying open the cavity, this tumor was found to be a solid mass, whitish, tuberculated, and covered anteriorly by a fine vascular membrane. The cardiac portion of the stomach was relaxed, and perfectly healthy; the pyloric portion was uniformly contracted to the diameter of an inch. The superior part of the above-mentioned tumor was closely attached to the anterior line of the contracted part of the stomach, answering to its greater curvature. Between the stomach and spine lay a second irregular tumor, larger than the first, closely attached posteriorly to the dorsal vertebræ, and anteriorly to the contracted portion, and lesser curvature, of the stomach. From the inferior edge of the posterior tumor, the disease appeared to have extended itself through the cellular tissue between the peritoneal and muscular coats of the stomach, round to the anterior portion, or mass, of the disease. This was rendered evident on observing the appearance of a transverse section, carried through the middle of the cavity of the stomach, and of the disease, by which it was nearly surrounded.

The posterior tumor had extended itself so far to the right, as to include and obstruct the biliary ducts, thus producing distension of gall-bladder and consequent jaundice. The villous coat of the stomach was perfectly healthy.

It is scarcely necessary to add to the above statement of its seat and connections, that this disease had probably commenced in the little omentum; and extending itself round the inferior surface of the stomach had induced a similar change in the greater omentum, forming the more prominent tumor, and adding to the obscurity of the case.

The above disease had, upon the whole, more of the schirrous, than of any other character.

CASE 27.

Hæmorrhage from the Stomach.

April 3, 1824. I was desired, Mr. HEAVISIDE being from home, to visit immediately Mrs. A., a lady aged 60, suddenly attacked with vomiting and purging of blood, extreme prostration of strength, and excessive depression of spirits. I found the skin cold and damp, the intermitting pulse scarcely perceptible. The sickness returned every few hours, and the quantity of dark fluid blood rejected at each effort was equal to three or four ounces. The bowels were griped, but not very relaxed, although when moved the stools contained blood similar in appearance to that thrown from the stomach. As excessive thirst was the symptom most complained of, some lemonade was allowed; and an acidulated infusion of roses directed to be repeated at short intervals, till her physician should arrive.

April 4. This lady's previous symptoms having been some degree of pain about the side and stomach, with a trifling cough, determined the physician in the opinion that the hæmorrhage proceeded from the lungs. Mr. CARPUE however, whom I met in consultation, agreed with me that where as in this case blood was only passed by vomiting and purging, and not at all by coughing, it was somewhat more probably derived from the stomach than the lungs. The symptoms unrelieved; the medicines were changed for the tincture of kino, and other similar remedies.

April 5. Much worse. The quantity of blood passed by vomiting and stool increasing. Towards evening, with great effort, I was told she had thrown up an extraordinary large mass of clotted

blood, which had nearly suffocated her. A large wash-hand bason contained nearly two pints of blood, in which floated the coagulum, about nine inches long, and between two and three inches broad; its form presented an exact cast of the cavity of the stomach. The medicines had in no degree arrested the progress of the complaints, which were producing rapid exhaustion; and early the next morning she died. Unfortunately, permission could not by any means be obtained for examining the body.

CASE 28.

Boiling Water Swallowed.

Mary Stockman, aged two years, *April 12, 1822*, at three P. M. went to the tea-kettle, and drank out of it some water boiling hot; which had been removed from the fire not five minutes before. She screamed out, and ran to her mother, some she threw out of her mouth, but some it was clear had been swallowed, as she immediately put her hand on her stomach, which was afterwards the principal seat of pain and distress. The child was immediately brought to me, with flushed face, rapid failing and irregular pulse, breathing laboriously, and with every appearance of approaching death. A gentle aperient medicine, with some liquor acet. ammon. was directed, at short intervals, with immersion in the warm bath. All the afternoon, writhing with agony, no one could nurse her; but she took the medicine, kept it down, and had a motion towards the night, which passed without sleep.

April 13. Pulse weak and intermitting, about 120. An oily aperient mixture was now directed; and operated twice, during the following night.

April 14. Respiration still hurried and laborious, pulse much the same. Much less expression of pain, on gently pressing the præcordia. A sa-

line draught, a small blister to the stomach, and castor oil at night; were directed.

April 15. I found the skin cool, less apparent anxiety, breathing much quieter and more free; pulse more regular. Had more sleep the preceding night, and less general restlessness. The bowels had been moved twice. The medicines were continued.

April 16. Pulse quite regular 120. Restlessness nearly gone. Had suckled for the first time since the accident. The bowels were regulated by castor oil. The child was so much better that I only visited her *April 21*, and then found her restored to perfect health.

CASE 29.

Boiling Water Swallowed.

On the afternoon of *August 30*, 1824, calling in to visit another patient, I was requested to see Henry Mills, a fine boy, four years old, said to be dying. At six P. M. the preceding day, playing near the fire, the child in the habit of drinking in that way, had drawn some boiling water out of the spout of the tea-kettle. The nurse alarmed ran to the nearest apothecary, who gave the child an emetic assuring the person there was not the least danger. Violent retching followed, but nothing else was done, till next morning Mr. HAMERTON was requested to visit the child, who very properly directed a warm-bath, some leeches to the throat, and an aperient mixture; acquainting the parents that so far from there being no danger, there was scarcely any chance of recovery. When I saw him, he breathed very quick, and anxiously, with a skin cold and clammy, and a pulse hurried, and intermitting. In a moment he started, sat up, and looked wildly about; and at eight P. M. died.

The following day, leave was obtained to examine the body. The stomach externally had no appearance of inflammation; on the œsophagus and trachea however, there was external redness. Internally the œsophagus was evidently somewhat inflamed, as was the mucous membrane lining the trachea, but in neither of these canals was there any distinct trace of effusion.

Just within the cardiac orifice of the stomach, an effusion of coagulable matter, mediate in appearance between lymph and ropy mucus, had taken place, and that so decidedly as to give the idea of an additional membrane lining the cavity, and visibly terminating at the cardia. This appearance was lost towards the pylorus, by the effused matter insensibly assuming the mucous character. In a few points, the villous membrane presented small spots of capillary vascularity.

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