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CASES OF MORBID ANATOMY.

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1900

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1900

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OF
MORBID ANATOMY.

READ BEFORE THE LITERARY AND PHILOSOPHICAL SOCIETY OF NEW-YORK,
ON THE EIGHTH OF JUNE, 1815.

BY JOHN W. FRANCIS, M. D.

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CASES OF MORBID ANATOMY.

1. HISTORY of a Case of DISEASED ŒSOPHAGUS, with a detail of the Morbid Appearances of that and of other parts of the body ; with Remarks.

THE information which morbid anatomy supplies is always interesting, frequently important, and may be considered in every instance indispensable, where a complete acquaintance with the exact nature and seat of disease is required. The following case, inasmuch as it exhibits no ordinary example of the great and various changes of structure which the body may undergo, during the predominance of the vital functions, seems to be calculated to augment the stock of physiological and pathological knowledge, if not to enlarge the sanative powers of medical science. The details of the case have been compressed as much as was deemed expedient : less minuteness might have prevented the forming an opinion, how far the symptoms corresponded with the appearances ascertained by dissection.

J**** S*****, fifty years of age, a native of Dumfries, in Scotland, of a habit of body rather delicate, and of the melancholic temperament, on the morning of the third day of September, 1814, while attempting to take his ordinary breakfast, found himself incapable

of swallowing, and that the efforts which he made to get even small quantities of food into the stomach gave him severe pain. He referred to the gastric region as the seat of part of the distress which he suffered, and more particularly to a circumscribed spot above the pit of the stomach, under the breast bone. Under those circumstances medical aid was deemed necessary, and he requested the attendance of Doctor David Hosack.

The patient is wholly at a loss to assign any cause for the existence of the alarming complaint under which he labours. He arrived in this country in the year 1796, and, with the exception of occasional slight attacks of cold affecting his chest, his constitution, previous to the year 1798, had never been impaired by disease, and he had uniformly enjoyed excellent health. He was accustomed to the promiscuous use of animal and vegetable diet, and his digestive powers were vigorous. In the summer of 1798, during the prevalence of the malignant yellow fever, in this city, he contracted this febrile disease, from which he with great difficulty recovered. In his case, the yellow fever exhibited its most striking characteristic symptoms; and the affection of his stomach was so severe, that he laboured under the black vomit and hiccup for many days: the black vomit, which was similar in its appearance to coffee grounds, was arrested by the free use of lime water and milk, and lime water and porter; then a novel mode of treating this distressing symptom, and first introduced by Dr. Hosack. Since that time the patient has not enjoyed his wonted share of health; though he resumed, and, with scarcely any intermission, continued engaged in his professional business, that of a blacksmith, his constitution he represented to be more nervous than formerly. On account of inattention to dress, and exposure to cold, he has also, since that period, suffered repeatedly and severely, from inflammatory affections of his chest; and in 1809 he had an attack of hæmoptysis, from which he lost a considerable quantity

of blood. In 1812 he fractured one of the ribs of his left side. In the winter of 1813—4, he again laboured under a severe pneumonic affection, but had not recourse to medical advice. His susceptibility to inflammatory diseases of the thoracic viscera being increased, and his professional employment exposing him to sudden changes of heat and cold, he, from this period to the time of his present illness, frequently suffered from attacks of pneumonia, and as often neglected the means of relief.

The weak condition of his digestive organs, which was first occasioned by the yellow fever of 1798, was often made manifest, more particularly for the last ten years of his life. He was frequently reduced to the necessity of rejecting the contents of his stomach immediately after eating either animal or vegetable food; and fish, though prepared in the most delicate manner, and taken in very small quantity, was so obnoxious to him as to cause excessive vomiting. For the last two years there has been an increase both in the frequency and in the severity of the disorder of his gastric region: the assimilating powers of the stomach being much impaired, he often complained of headach, heart-burn, flatulence, and other symptoms of dyspepsia, with a costive state of his intestinal canal. During the early part of the summer of 1814, he at times stated to his friends, that he found considerable difficulty in swallowing; that repeated efforts were necessary, in order to make substances, in any degree hard, pass down into the stomach; that these efforts produced a sensation of choking, and were attended with some pain; and that even fluids were not taken in with the same facility as formerly.

From this period, finding the symptoms of his complaint gradually becoming more alarming, and his constitution evidently more impaired, he judged it expedient to solicit medical advice, and was accordingly

visited for that purpose, on the morning above mentioned, and under the circumstances already noticed.

He immediately lost blood from the arm, to the amount of sixteen ounces, and a large blister was applied to his chest: the epispastic produced its expected effects, and finding him somewhat relieved, a cathartic, composed of the submur. hydrarg. and pulv. convolv. jalap. in syrup, was administered, and the antiphlogistic treatment pursued for several days. As he could now swallow nourishment with more ease than for some time previous, he determined upon a temporary abandonment of his professional business, and to retire, for a few weeks, into the country. Thither he went, but without benefit; his primary disease, instead of being mitigated, was increased in its severity, and to a degree that he was induced to subsist almost exclusively upon food of a fluid consistence, as beef and veal broth, oatmeal gruel, panada, &c. He, however, could swallow with much greater ease at one time than at another. In this condition he returned to this city about the close of September. Beside the difficulty of swallowing, he now complained of pain under the region of the scrobiculus cordis, and of considerable irritation and soreness of the chest, doubtless the effect of exposure to sudden changes of temperature, during his excursion in the country.

On the 1st of October he was again bled freely; blistering was again had recourse to, and active purgatives prescribed. He considered himself as deriving but little advantage from this mode of practice: whenever he omitted thoroughly to masticate his food, he was liable to returns of the spasms in attempting to get solid nourishment into the stomach; and water, whether hot or cold, could seldom be taken freely with impunity. The patient's constitution having become materially enfeebled by the continuance of his disease, and the active means used for its removal, blood letting, blisters, and other depleting remedies, not answering the indications of antispasmodics, it was determined

upon, in consultation, to use mercury, both on account of its general deobstruent effects, and the acknowledged celebrity it had long ago obtained in the removal of affections of the same, or of an analogous character.

On the 7th of October he commenced taking the submur. hydrarg. grains two, twice a day, and shortly after, in order the sooner to excite the action of this mineral on his constitution, the ungt. mercur. fort. was rubbed upon the lymphatics of the chest, of the inner parts of the thighs, and of the legs. Opium was occasionally given to prevent the undue action of the mercurial salt upon the bowels. He was also bled on the thirteenth, on account of a severe spasm, and had an additional blister applied, which, with other blisters, was dressed with the mercurial ointment. He continued under the mercurial treatment nearly seven weeks, during which time no means, calculated to produce a preternatural increase of the salivary discharge, were neglected; but all endeavours for this purpose, were followed with very partial success, a slight soreness of the gums, which lasted for a few days, being all that was apparent.

At the beginning of December, the patient's constitution was still more enfeebled. He expressed little inclination for nourishment, and much less than his ordinary quantity sufficed. He complained of great pain while attempting to swallow, but did not suffer so much from his dyspeptic symptoms. He frequently rejected what he swallowed, but the exertions which he now made for this purpose, were scarcely under the control of the voluntary powers, and were accompanied with comparatively little pain. The stricture of the œsophagus was evidently greater; even jellies in very small quantities could be taken in but slowly, and with great difficulty. The bowels at this period were generally costive: pulse, heretofore about natural, was now quickened; respiration more frequent and anxious; the heat of the body scarcely

increased. Sometimes he laboured under slight cough, and represented that he experienced a sense of tightness under the sternum, with occasional pain extending along the anterior extremity of the ribs, in the course of the attachment of the diaphragm. He also obtained but little sleep; his intellectual faculties were not impaired, and he indulged strong hopes of recovery. Pills of equal parts of aloes and gamboge, grains three, were ordered to be taken as occasion might require; blisters were directed to be applied to the parts more immediately the seat of pain, and to be dressed with mercurial ointment, and the use of demulcent drinks recommended.

The symptoms of his disease were, in some degree, increased about the commencement of January, and the affection of the thoracic region more general: he continued to refer the pain not merely as under the sternum, but as extending itself, and being almost constant in the course of the diaphragm, and though not quite so acute as about two weeks previous, yet as giving him much distress, and occasioning a sensation of fulness. He was also considerably troubled with hiccup. He rejected his food upon swallowing, and immediately after retching a mucous excretion succeeded. Sometimes the mucous discharge was in considerable quantity, and variegated in its appearance with purulent matter. His restlessness at night was greater; the energies of his mind were not diminished. Though little benefit was expected from any mode of treatment that could be adopted, he was now directed still to continue in the application of blisters and other irritants; to keep up the peristaltic motion of the intestines by cathartics, and to take opiates at bed time. He was particularly desirous of milk, which aliment was ordered him.

On the 20th of January, he stated to his medical attendants, that the soreness of his chest was greatly lessened. He, however, was not inclined to take food, and when he did, it was most commonly thrown up,

combined with mucus and a purulent secretion. The functions of the intestinal canal being nearly restored to their natural state, he seldom had recourse to evacuant medicine. He was, at this period, ordered to continue his diet as formerly ; milk and porter, lime water and milk, and at intervals the decoct. quassiae compos. a wine glass full, at each portion.

February 4th. The patient, agreeably to request, during several days in the latter part of January, took exercise in the open air ; but he at present found his weakness increase to a degree that forbade the same muscular exertion. He continued the greater part of his time in a horizontal posture, with his head a little elevated ; he was much emaciated, and in addition to his ordinary sufferings, complained of a heavy pain in the back and loins : his pulse was quickened, and respiration somewhat frequent. The nutriment, taken during the twenty-four hours, at this stage of his illness, was never more than two fluid ounces ; generally about one, and was seldom retained. No particular alteration was made in the prescriptions ; to mitigate his distress he occasionally took a grain of opium.

Feb. 10th. The disorder was manifestly progressive. The difficulty of swallowing much greater ; he now suffered from soreness of the throat ; the food he took was rejected almost immediately, with an increased quantity of the purulent matter ; the bowels were frequently disturbed ; his voice was weaker than natural, but loud enough to be distinctly heard. A flannel bandage was recommended to give support to the abdominal muscles ; opium to arrest the undue action of the intestinal canal ; and the balsam. copaif. twelve drops, to be taken four times a day, as a stimulant. The volatile liniment was directed to be externally applied about the throat.

Feb. 14th. Though still more emaciated, his strength was not at all diminished, for the last ten days : the soreness of the throat was now,

indeed, more extensive, and the quantity of purulent matter greater, and mixed with a peculiar black material, apparently analogous to the animal charcoal obtained by Dr. Pearson from the bronchial glands, and from the lungs :* the diarrhœa continued ; pulse and respiration about natural ; mind not depressed. He was enjoined to continue in the use of the remedies last stated ; but to take an increased quantity of opium, united with tincture of kino.

In the course of the subsequent week, the troublesome affection of the bowels was subdued, though the secretion of purulent matter was greater and darker coloured : He also brought up a great deal of mucus, particularly after speaking. The soreness of the parts about the base of the tongue, and round the throat, was augmented, and he articulated slowly, and with difficulty. He expressed great desire for food ; but the quantity of aliment he took within the twenty-four hours, was scarcely one fluid ounce of the consistence of panada.

Feb. 23th. The symptoms of general debility were materially aggravated : the affection of the throat was not as painful, nor did the occasional efforts which he made to swallow, give him uneasiness : but the passage to the stomach was so impeded, that his nutriment was almost instantly rejected, discoloured with the purulent and seemingly carbonaceous matter. Attacks of coughing occasionally seized him, and by these he was assisted in freeing himself of the morbid secretion, which now amounted to eight ounces daily. Under his present circumstances, the hiccup was still the source of much distress to him. He was requested to continue in the use of opiates ; and, to support life, enemata of mutton suet, &c. with tincture of thebaïc, were administered.

* Philosophical Transactions of London, part 2. for 1813.—Lond. Med. and Physical Journal, vol. 31. p. 128.

March 3d. The marasmus was extreme, and yet he was willing, and indeed able, to exert considerable muscular motion, inasmuch as he at times walked about his room. He suffered an increased difficulty in respiration, and it was irksome to him to eject the purulent matter. The hiccup continued distressing to an uncommon degree.

On the 6th of March, he articulated more indistinctly, and with increased difficulty; but the soreness of the throat was not so distressing. Beside greater restlessness, he was often disturbed at night with a sense of suffocation. The purulent secretion was diminished in quantity, though not altered in quality: at this period he also laboured under great thirst: his debility was so great, that it was scarcely practicable, and no longer deemed expedient, to have recourse to enemata for his support.

During the two following days, he scarcely retained the power to articulate; and he did not expectorate so large a quantity of matter: he complained of excessive thirst, and desired cold water, of which, to the astonishment of his friends, he was able, by repeated efforts, to swallow several ounces.

On the morning of the 9th of March, his symptoms were still more unfavourable, and though he was apparently exhausted, yet the faculties of his mind retained a large share of their accustomed vigour, and continued undisturbed: at 12 o'clock the hiccup became incessant, and at 5 o'clock, P. M. he calmly expired, worn out from the irritation of disease and from inability to take nourishment.

Leave being obtained to open the body, I carefully examined it, fourteen hours after death, in the presence of Dr. Hosack and Mr. J. B. Stevenson. The following appearances were observed.

MORBID APPEARANCES ON DISSECTION.

The emaciation of the body was extreme ; not a particle of adipose substance was visible, and upon removing the common integuments from the anterior part of the neck and chest, and cutting open the abdominal parietes, the muscles themselves seemed to be completely wasted.

Upon raising the sternum, its lower surface and the anterior mediastinal cavity presented strong marks of disease ; the thyroid gland was apparently neither enlarged, nor in any degree materially affected. The larynx and trachea showed the effects of former inflammation, and a small portion of the posterior part of the trachea was destroyed by ulceration, which formed a communication with the œsophagus. The pharynx had undergone considerable changes from disease ; its inner membrane was ulcerated in various parts, especially at the inferior extremity, and that side of it which is next the trachea. Upon laying open the œsophagus, the following appearances were exhibited.

The parietes of the œsophagus, throughout their structure were more than ordinarily thick, and in several, and at distant places, hard and scirrhus in their texture. Somewhat more than an inch from the cardiac orifice of the stomach, there was a stricture which extended upward one and an half inches in length : the substance of the part involved in the stricture, was thicker than elsewhere : its several coats were distinctly observed : the rugæ were hard to the feel ; the transverse muscular coat was contracted, and the outer one materially altered, as if from inflammation. The strictured part of the œsophagus was so narrowed in its canal as to be impervious to a common sized probe. Just above the stricture, toward the right side and posterior part of the œsophagus, there was a tubercle two thirds of an inch long, and half

an inch broad, lying obliquely transverse, seeming sacculated and hard. Upon a closer examination this tubercle was found to contain a material of a cheese-like consistence. A short distance above the tubercle commenced the ulceration of the œsophagus, presenting an extraordinary mass of disease. The ulcer involved the several coats of the œsophagus so as to render it impossible to discriminate between them; those parts which were not affected by suppuration were augmented in thickness, and were, in many respects, of a scirrhus or gristly nature. About an inch above the tubercle, the ulcerous erosion had created an opening into the trachea. The upper part of the œsophagus, nearest the vertebræ, was deeply excavated by the ulcer which here formed a sinus of some extent. The inferior extremity of the pharynx also partook of this diseased condition of the œsophagus. The aorta was firmly attached to this tube, but in no wise altered in its structure.

The stomach was considerably contracted: externally, it manifested no marks of disease, and its several coats could be easily traced; internally, it was supplied with its ordinary mucus, and contained about an ounce of fluid: its rugæ were very large and numerous, and increasing in size as they approached the inferior orifice. The duodenum was partially contracted, but in every other respect natural. The other intestines were not particularly examined. The liver was of the ordinary magnitude, and both externally and internally presented a healthy appearance. The gall bladder was full of yellow bile of a thin consistence: its duct, as well as the ducts of the liver, was of the common size, and pervious. The spleen had undergone some slight deviation from its healthy structure: it was rather larger than this viscus commonly is, and its vessels were in a highly turgescenced state. The pancreas, though considerably enlarged, did not exhibit to the eye any alteration in its structure; but upon further inspection, it was discovered to be remarkably hard, and partially cartilaginous. Its lobulated

structure was nevertheless discernible : its excretory duct had preserved its character. The omentum was rather contracted, possessed little fat, and evidenced some signs of former inflammation.

The heart had not a vestige of fat about it ; was uncommonly small, but otherwise natural : the pericardium contained between two and three ounces of a serous fluid. The lungs exhibited a very peculiar and striking appearance, unlike any that I find described in *Bonetus*,* *Morgagni*,† *Clossy*,‡ *Haller*,§ or *Baillie*.|| They were throughout in a state of induration, completely filled the thoracic cavity, and had formed the most extensive adhesions. This was particularly the case with the right lung, which was firmly united to part of the pericardium by a strong membranous adhesion, to the pleura of the ribs, to the mediastinum, and to the diaphragm ; the lung itself was changed into a very firm substance, resembling a scirrhus gland ; it resisted pressure, and did not collapse when cut, nor pour out any blood. On the surface of the lung, and internally, there were numerous bodies of a scirrhus appearance, of different figures and sizes, from that of a pea to that of a common grape ; some were of a much larger diameter : in some few parts they were found to be separate from each other, and in other parts they were coalescing, and formed large morbid masses. They were rather more numerous on the outer than in the inner portion of the lung, and occasioned considerable irregularity of its surface. With the exception of their being of different sizes, they all possessed a similarity of character, adhered closely to the substance of

* *Sepulcretum, sive Anatom. Pract.*

† *De Sedibus et Causis Morborum.*

‡ *Observations on the Diseases of the Human Body.*

§ *Pathological Observations.*

|| *Morbid Anatomy of the Human Body.*

the lung, and when cut into caused a crepitus, and imparted a gritty sensation analogous to that arising from dividing matter intimately mixed with large sandy particles. They had no peculiar covering that could be detached, and did not possess any vascularity. The left lung was adhering to the mediastinum and to the diaphragm, and between this lung and the pleura costalis, there was effused about eight ounces of a semi-purulent fluid. The inferior part of the left lung was also by no means of so firm a consistence as that of the right. It nevertheless had many of those scirrhus bodies on its surface, and throughout its texture. Upon cutting into it a frothy purulent fluid oozed out, in very small quantity. The colour of these indurated bodies, so numerous in both lungs, was that of an extremely dark blue, or almost black. Of the diaphragm, it has already been stated, that it was strongly and closely attached to the right and left lungs; and from all that was noticed, it was apparent that the inflammation had extended much deeper than the common pleuritic covering of this muscle.

The history of the preceding case, with the detail of morbid appearances upon inspection after death, seems to furnish room for one or two remarks.

As to the causes which laid the foundation of the disease of the œsophagus: these, I think, are abundantly obvious. Irritation is acknowledged to be a frequent cause of spasmodic action. That the disorder now noted was, at its commencement, of a spasmodic character, may be concluded from the manner in which the patient was first attacked, from the mode in which relief was obtained, and from the return of the complaint at intervals. That repeated returns of spasms, whether affecting the œsophagus, intestines, or urethra, may, and frequently do produce a thickened and irritable condition of the part thus acted upon; that the ordinary secretion of the part, the seat of such attacks, may be diminished in quantity or altered in its nature; that

the disposition to take on spasmodic action may increase, and the ability of the part to relax be diminished; and that, ultimately, the passage of the canal may become more narrow, and its sides at length be brought into a state of co-aptation, seem to be opinions sufficiently well established. In like manner a spasmodic may become a permanent stricture. Certain habits of body are disposed to spasmodic affections in general, and the same habit more at one time than at another: thus, strictures of the œsophagus occur more frequently in females than in males, and in persons whose susceptibility to impression is increased by debility, or some other cause. Such is the fact with regard to almost all the cases of stricture of the œsophagus recorded by Sir Everard Home,* and with a very large majority of instances of the disorder as related by other writers.

In the present instance there can be no room to doubt, that the derangement of the stomach, first occasioned by the malignant yellow fever, most materially contributed to the formation of the stricture of the œsophagus, by rendering this tube in a particular degree susceptible of irritation and of morbid contraction: and the opinion so cautiously expressed by the celebrated Abernethy, is strengthened by this view of the cause of this disease. Speaking of spasmodic strictures of this part, he observes; "Many cases have occurred to me lately, in which the irritation of the œsophagus seemed to be first excited and afterward maintained by disorder of the digestive organs."†

There are other reasons which may be advanced in corroboration of this opinion, and they are those which seem to be obviously deduced from what is known of the predisposing causes of some of the most

* See Practical Observations on Strictures in the Urethra and in the Œsophagus.

† Surgical Observations, part 1. p. 184. Ed. 1809.

decided cases of stricture and scirrhus of the pylorus, though, indeed, the glandular structure of this part, in its most healthy state, must not be overlooked as a concurring circumstance, favourable to the production of affections of this kind, as remarked by Dr. Baillie,* in which opinion, however, he had long been anticipated by Hoffman.† When the stomach has lost its tone, it is more particularly liable to disorders of this alarming nature. The case of the late distinguished Dr. Peter Middleton, Professor of Medicine in King's College, is a memorable example of this truth. Debility of the digestive organs, as I am informed by the venerable Dr. Samuel Bard, preceded the formation of the stricture and scirrhus of the pylorus, from which he died in January, 1781, after ten months' suffering. The particulars not long since made public, by the late Doctor Ferriar of Manchester, of a case of unmixed scirrhus of the pylorus favours the same deduction;‡ and in another formidable instance of the same distressing complaint, which was followed by considerable ulceration, as dissection proved, and which occurred in the practice of Dr. Hosack, in March last, frequent attacks of diarrhœa, for a period of four years, prostrated the patient's strength, and were among the precursors of the disease.§

On the 4th of June, the present year, I examined the body of a female subject, aged thirty-eight, who had died on the preceding day, of a complication of distressing symptoms. Among other morbid changes which were perceived, was a scirrhus of the pylorus, which completely closed the inferior passage of the stomach, and about which

* Morbid Anatomy of the Human Body.

† Medicin. System. Rational. tom. 3.

‡ Med. Hist. and Reflect. vol. 4. p. 111.

§ See the Details in the present paper constituting the second case of Morbid Anatomy.

part, externally, was attached a tuberculated excrescence two inches in length, and half an inch in breadth. This patient, as was stated upon the best evidence, had undergone extreme corporeal suffering for more than twenty years, in consequence of a most weak and irritable condition of the digestive organs, and an uncommon state of the hepatic viscus.*

But subsequent observation and experience will determine, whether this idea of the predisposing causes of these affections of the œsophagus and of the stomach, be tenable or not.

It has been observed by Sir Everard Home, that where strictures of the œsophagus have been of long continuance, ulceration takes place on the side of the stricture next the stomach. The case before us furnishes an example directly of an opposite nature : from the cardiac orifice to the commencement of the stricture not the least sign of disease could be discovered. We also find that the stricture preserved its character entire, though the œsophagus was ulcerated to an uncommon degree and extent. The causes of the appearance of the stomach meet with a ready solution, when the nature and small quantity of the aliment it received for a long time are considered.

That the morbid state of the pancreas must have added to the disordered condition of the digestive organs, will be readily admitted, upon whatever pathological principle the fact is attempted to be explained. In his *Observationes Medicæ*, Tulpius has inserted, at considerable length, the particulars of a remarkable case of diseased pancreas. In this instance, one of the most prominent symptoms of disease was the inability of the patient to sleep, or to find relief in any other than in an erect position ; for whenever he took a horizontal

* See the Details in the present paper constituting the third case of Morbid Anatomy.

posture, he suffered extreme distress in the loins, abdomen, &c. In noting the most serious consequences arising from affections of the pancreas, among others Tulpius enumerates vomiting and great restlessness.* Indeed, it seems necessary to advert to the indurated state of this gland, in order to account, in some degree, for the great sickness and remarkable irritability of the stomach, and particularly for that obtuse, circumscribed, and constant pain in the epigastric region, of which the patient, the subject of the present case, so long and so loudly complained. These symptoms, and particularly the latter, have been observed almost always, I believe, to be attendants upon an indurated and enlarged pancreas. They are prominent among the features of this disease, as we find in Bonetus,† and Morgagni:‡ Riverius did not omit to specify them,§ nor was Stoll ignorant of them:|| they are noticed in the case which fell under the care of Dr. Clossy, formerly professor of Anatomy in King's College in this city;¶ they are described by Baillie,** and are considered among the most certain indications of an enlarged and scirrhus state of this viscus, by Dr. Sewall, of Boston, as ascertained by him in two striking instances upon examination after death.†† In a late communication on tumours, which have occasionally been mistaken for diseases of the liver,

* *Observationes Medicæ*, lib. iv. cap. 33.

† *Sepulchretum Anatom.*

‡ *De Sedibus et Causis Morbor.* Epist. xxx.

§ *Opera Riverii*, *Præxeos Medicæ*, lib. xii.

|| *Ratio Medendi*, vol. 1.

¶ *Observations on some of the Diseases of the Parts of the Human Body*, chiefly taken from the Dissection of Morbid bodies, p. 81.

** *Morbid Anatomy*, third ed. p. 270.

†† *New England Journal of Med. and Surg.* vol. 2. p. 21.

Dr. Latham, of London, points out the diagnostic signs of an indurated pancreas, and has noticed as such the pain in the region of the scrobiculus cordis and the dyspeptic symptoms.*

How far the hiccup, which proved so distressing to the patient, depended upon the affection of the diaphragm, I shall not venture to conjecture. This important muscle was, however, most materially affected, and yet that violent train of symptoms that designate diaphragmitis, (*paraphrenitis diaphragmatica*,) according to nosological writers, was at no time present.†

It is very generally supposed that ulceration of the superior part of the œsophagus, particularly when it has proceeded to any considerable extent, produces an enlarged or hardened condition of the thyroid gland. The case now described, will induce us to limit the application of this pathological doctrine.

The appearance of the pulmonary organs is a circumstance too singular to pass over without notice. The picture attempted to be sketched of the changes wrought in the lungs, conveys but an imperfect idea of the morbid anatomy of this part, and none of the symptoms under which the patient laboured, was pathognomonic of such changes existing in the system ; though it must here be stated, that he oftentimes, long before the affection of the œsophagus, complained of sufferings of an asthmatic kind. The repeated and long continued complaints of an inflammatory nature affecting his chest, the indifference with which he regarded them, and the mechanical pursuit which he steadily, and for many years, followed, are probably the most efficient

* Medical Transact. of the College of Phys. of London, vol. 4.

† Sauvages, Nosolog. Method. De Haen.

causes that can be assigned for the remarkable alteration visible in the lungs.

The lungs have been observed to be converted into a solid body resembling the liver, and the change has been ascribed by Dr. Baillie, to a "wide extended inflammation," in which a large quantity of coagulable lymph has been extravasated into their substance :* and this conversion, according to Mons. Dumas, frequently supervenes after inflammatory affections of the pulmonary organs.† Earthy concretions, of a considerable size, have been found in the lungs, according to Morgagni:‡ Bonetus has given numerous cases of asthma and dyspnœa depending upon stony-like indurations in the same organs ;§ and the same elaborate writer has informed us, that in constitutions where a strong predisposition to the formation of bone has existed, a portion of the lungs has been converted into an osseous substance. Foreign bodies of different kinds have been found in the pulmonary vessels of artists of different professions, as we learn from Ramazani and others,|| and the distinguished Dr. John C. Warren, of Boston, has lately published the particulars of a case of organic disease in which the lungs were transformed into a hard tumour, so that the thoracic cavity was completely filled by a resisting solid body.¶ But I have searched in vain to find an instance of diseased lungs similar to the one endeavoured to be described. The account which the late Dr. Stark has given of the character and situation of tubercles found in these

* Morbid Anatomy, p. 75.

† London Med. and Physical Journal, vol. 16. Principes De Physiologie.

‡ De Sedibus et Causis Morborum, epist. xv.

§ Sepulcretum, lib. 11. sect. 1. De Respiratione lesa.

|| De Morbis Artificum : vide also Bonetus.

¶ New England Journal of Med. and Surg. vol. 1. p. 124.

organs, is applicable, in some few respects, to the bodies perceived in the present case, but in other respects, will in no degree answer.* The lungs, indeed, scarcely retained the least trace of their original organization ; with their increase of solidity, they possessed an increase of bulk, and it must be matter of surprise how the respiratory process, so imperfectly performed, could support the vital powers to the degree it did. The term scirrhus, used to designate the indurated bodies found in their substance, and on their surface, is had recourse to for want of one more characteristic. They were of a firmer texture than bodies of a scirrhus nature, and from this circumstance, as well as from their atro-purpureus colour, and there being no appearance of suppuration in them, their peculiarity may be ascribed to the minute ferruginous particles floating in the air, which the patient inspired while engaged at his professional business.

So slight were the appearances of suppuration in the lungs, that it cannot be said, with certainty, whether any of the mucus or purulent matter which the patient ejected during his illness, did or did not proceed from them : the ulceration of the *œsophagus* and *trachea*, was probably sufficient to account for all that he expectorated.

With regard to the medical treatment, the reader will anticipate the remark, that medicine could avail but little. After the inefficiency of the mercurial plan was fully shown, the means employed were those which seemed best calculated to prolong life on the most advantageous terms : the application of caustic was not made from a belief that it would greatly augment the sufferings of the patient and fail in producing a radical cure.

To conclude : the present will stand conspicuous among that class

* London Medical Communications, vol. 1. p. 361.

of cases observed by clinical practitioners, wherein the mind remains uninfluenced by corporeal disease ; where the greatest physical disorganization of the thoracic viscera may exist while the intellectual powers preserve their integrity, and manifest their wonted vigour and functions.

II. CASE of SCIRRHUS of the PYLORUS.

To the preceding paper I am induced to add the following particulars of a case of *scirrhus of the pylorus*, to which reference has already been made. Repeated observation has, indeed, abundantly proved how various and perplexing are the symptoms of organic affections of the stomach. The diagnostic part of medicine must, however, to some extent, be advanced, by prosecuting inquiries which connect the signs of diseased action, with those morbid changes of structure which may be considered either as the cause or the effect of symptoms which manifested themselves before the extinction of the living principle. The present case exhibits, in a striking degree, the characteristic symptoms of this incurable affection of the pylorus. See Dr. Ferriar's Medical Histories and Reflections, vol. 4. and the Review of Mons. Chardel's *Monographie des Degenerations Skirreuses de l'Estomac*, in the Edinburgh Medical and Surgical Journal for 1812.

J**** B*****, in the 49th year of his age, was of a spare habit of body, particularly in the early part of his life ; was brought up to the trade of a wheelwright, in the place of his nativity, New England, but for a considerable time past has been engaged as a practical farmer in New-Jersey. For nearly ten years previous to the illness of which he died, he had enjoyed a very good share of health,

with the exception of occasional attacks of diarrhoea, which, during the last four years, became extremely severe and troublesome, weakened his digestive organs, and greatly impaired his constitution.

During the war just closed, as a subordinate officer, he was actively engaged in the discharge of duties incident to his military appointment, and frequently subjected himself to the vicissitudes of the weather: during an inclement season in September, 1814, while on the sea coast at the Narrows, he contracted an inflammatory disorder of his chest, from which, however, he was soon relieved. About this period he found his appetite for food decreased, and, from the diminished quantity of nutriment upon which he lived, his health was much impaired. He stated that he felt considerable soreness under the region of the pit of the stomach, and further added, that, although he had not before made it known, he had suffered this particular pain repeatedly before, and at considerable intervals. He was not, at this time, under the care of any medical attendant, and all he did for his complaint, was living upon aliment less exciting and more easy of digestion than that to which he had been accustomed.

During October he was sometimes affected with nausea, and ejected the contents of his stomach; but in the subsequent month, it was a common occurrence with him to be attacked with excessive vomiting, particularly upon lying down upon his right side. Toward the close of November he applied for the advice of a neighbouring physician, who recommended the application of blisters, and the use of cathartics, for the purpose of diminishing the soreness under the scrobiculus cordis, and of allaying the irritability of the stomach. Though he enjoyed a respite from pain, at intervals of some twenty or thirty hours in length, it was evident that his disorder was becoming more formidable.

In December he was often under the necessity of ejecting the contents of his stomach two or three times a day, and so enfeebled were the powers of digestion, that a cup of common gruel would induce him to make efforts to vomit. The quantity of the material discharged by the stomach was nearly equal to the amount of food taken, which rendered it conclusive, that only a very small portion of his aliment entered into the intestines. At this period his mind participated in the diseased condition of his corporeal system, and for the remainder of his sickness he laboured under extreme lowness of spirits, fully convinced, as he said, that he should never recover his former health.

His attacks of vomiting became more frequent during the months of January and February. He continued to complain of great and more uniform pain in the region of the *scrobiculus cordis*, where something like a circumscribed tumour was felt. He most generally ejected about half an hour after swallowing; the food thus discharged had undergone but very little alteration by the digestive process, and was mixed with some viscid matter. If he attempted to seek repose by lying on his *right* side, extreme nausea and vomiting were inevitable. Although his exertions to eject required no labour, yet the materials thus thrown up, were discharged with violence, in a projectile manner, and at the distance of many feet. After vomiting he experienced some few moments' exemption from distress. His bowels were obstinately costive; the urinary secretion small in quantity, and high coloured; his constitution much enfeebled, and his emaciation very considerable. Some attempts, as I ascertained, were made at this stage of his disorder, to subject his system to the action of mercury, but these attempts proved unsuccessful. Sedative medicines availed but little, and active cathartics were required to excite the intestinal canal to its wonted functions. He now had great desire for nutriment, but the anxiety he felt on account of the vomiting that was sure to take

place upon eating, induced him to make a cup of milk his principal support for the twenty-four hours.

As circumstances permitted he was occasionally visited by Dr. Hosack in the month of March, at his residence in New-Jersey : at this stage of the disease there was a regular increase in the disorder of his stomach, and his bodily and mental powers became more and more impaired. His stomach contracted upon the least quantity of aliment, whether in a solid or fluid state ; he was also much annoyed with cardialgia and eructations of an acid and foetid nature : his food was seldom retained longer than five minutes, and discharged with additional violence : the quantity of the substance thrown up was greater than that of the nutriment taken in ; its appearance was changed to a dark soot-like material of a fluid consistence, united with some purulent matter, and emitted an extremely offensive odour. The evacuations from the bowels, which were however very seldom procured, and then but with much difficulty, appeared to have undergone the same changes as the matter discharged from the stomach, and were said by the patient to exhibit, to a considerable degree, both in colour and consistency, the appearance of tar. Toward the close of his illness, his stomach became more retentive, and he frequently complained of excessive thirst. At the suggestion of Dr. Hosack the patient now took very small draughts of lime water and milk, which were sometimes succeeded by a few moments' relief. His bowels remained in a constipated state for more than six weeks previous to his decease, and his only means of support were, for an equal length of time, nutritious enemata. On the morning of the 15th of April he breathed his last.

The abdominal viscera were examined six hours after death by my friend, Dr. Caspar W. Eddy. Several small whitish tubercles were seen on the surface and in the parenchymatous substance of the liver. There were no morbid appearances in the spleen, pancreas, or in the

intestines. The superior portion of the mesentery exhibited some slight marks of disease, being more than ordinarily thick, and preternaturally hard, and possessing here and there small tubercular elevations. The stomach was more than three times its common size, and was distended with a black fluid, resembling a mixture of soot and water combined with a small quantity of glutinous matter, and was particularly offensive to the smell. The coats of the stomach investing its superior curvature were greatly augmented in thickness: the cardiac portion was free from disease. A portion of the greater extremity, for about two inches round the pylorus, was in a perfectly scirrhus condition, and full one inch in thickness; a part of this thickened mass had advanced to a state of ulceration. The pyloric orifice made resistance to the passage of a common sized probe.

III. CASE of SCIRRHUS of the PYLORUS accompanied with a TUBERCULATED LIVER.

ON the morning of Sunday, the 4th of June, 1815, I was requested, in connexion with Dr. William Handy, a respectable physician of this city, to examine the body of a female, aged thirty-eight years, who had died on the preceding day of a complication of distressing symptoms. On this occasion our attention was necessarily confined principally to the appearances which might be discovered in the abdominal cavity.

Not the least portion of the omentum was present. The stomach was much smaller than natural, and contained about ten ounces of a dark fluid, intimately mixed with a substance similar to coffee grounds, of a somewhat offensive smell, and seemingly acrid nature; its internal coat presented some slight marks of former inflammatory excitement,

and its whole surface was covered with a tenacious, dark coloured mucus. The most important change, however, which was found to have taken place in this viscus, was a scirrhus of the pylorus, which, from all that could be perceived, completely closed the inferior passage of the stomach, about which part, externally, was attached a tuberculated excrescence two inches in length, and half an inch in breadth, and greatly resembling, in its colour, that of a natural pancreas.

The whole of the small and great intestines manifested a perfectly sound appearance. Some few of the glands on the mesentery were larger and harder than ordinary. The spleen and the pancreatic gland were in a healthy state. It is an undertaking not altogether void of difficulty, to communicate, by words, an exact idea of the great and remarkable changes which the liver had suffered.

This organ was so much enlarged, that it occupied not only all the right hypochondrium, but also the epigastric region as low down as the umbilicus, and a very considerable part of the left hypochondriac region : previously to our opening the abdominal parietes, its hardened and irregular surface could be distinctly felt under the integuments, covering the parts just noted. Both the convex and concave surface of the liver were vested with *tubera* : there were, probably, about sixty of these bodies on its superior surface ; on the inferior surface they were more numerous. They also pervaded the inner surface of the liver, sometimes in a distinct, and at other times in a confluent form. The tubera were all of the same nature, though they varied in size : on the outer surface of the gland they preserved their distinctive form, elevated the peritoneal covering of the liver, and were sparsely variegated with red vessels : in their colour they much resembled a cream white ; at or near their centre they had a little depression, which presented an appearance whiter than elsewhere. In several places,

internally, these tubera closely approximated, and seemed to be adhering to each other: the largest of the inner tubera that we noticed, was three and a half inches in diameter, and upon their being dissevered by the knife, a very small quantity of an opake white fluid exuded from them. Upon making various sections, the substance of the liver between these tubera was always found to be less vascular, and its cohesive powers more feeble than natural.

It deserves to be stated, that, notwithstanding the enlarged and diseased condition of the hepatic organ, the gall bladder was half full of well-formed bile; that there was no effusion of water in the cavity of the abdomen, and that at no time, during a long illness, did the patient labour under jaundice.

"I believe," says Dr. Baillie, "that the large white tubercle is not so often attended with jaundice and ascites as the other."

I shall briefly relate the principal circumstances that seem to throw light on the nature of the preceding case, so far as it has been practicable to obtain an accurate knowledge of them.

The patient, from her infancy, uniformly possessed great feebleness of constitution, and for the last twenty years of her life was seldom exempt from disease. She was the mother of several living children. The complaint from which she suffered most severely, was an extreme debility of the digestive organs, which caused her to be at all times cautious in the choice of food; and to depend for alimentary support chiefly upon plain broths and milk. She was never in any degree addicted to the use of spirituous or malted liquors.

The symptoms which distinguished the irritable state of her stomach, were similar to those already mentioned in case the second, though it was only for the last two years that she suffered most remarkably on that account. She often complained of nausea, and frequently ejected her food soon after a meal. Her distress when lying down at night was

always aggravated, provided any nourishment had been taken a short time previous; and the pain that gave greatest uneasiness was seated in the *right* side, directly at the inferior orifice of the stomach, and was always aggravated when she laid down upon that side.* The attacks of vomiting sometimes came on very suddenly; and, for several weeks before death, she discharged the contents of the stomach with extreme violence. The functions of the intestinal canal were performed with great regularity until within some few months previous to the termination of her disease.

In the spring of 1813, she suffered from an acute inflammation of the liver; but this affection seems to have been confounded with the disorder of her stomach, as nothing was particularly done for her relief. During the autumn of the same year, she again laboured under another violent attack of hepatitis. From this period she was at no time relieved from distress in the right hypochondriac region, and other symptoms which pointed out a chronic enlargement of the liver. With the exception of an ineffectual attempt to excite the salivary glands by a few grains of mercury, which attempt was made by one of the several practitioners of medicine under whose care she placed herself at different times, the treatment both of the hepatic and of the gastric disorder was exclusively dietetical.

* Such was the fact with regard to the patient, the subject of case the second. This symptom, indeed, seems to be eminently deserving of recollection, though it does not occupy a place in any of the medical histories of cases of this disease heretofore recorded. I am inclined to think it will be found to be one of the most prominent circumstances indicating the forming stage of scirrhus of the pylorus, and in this belief I am strengthened by the opinion of one of the most accurate observers and experienced practitioners of the present day, Dr. SAMUEL BARD, now President of the College of Physicians and Surgeons in the University of the State of New-York.

The preceding facts warrant the deduction, that the temperament of the patient, and the extreme feebleness of her digestive powers, were the primary causes of the organic disease of the stomach: that repeated attacks of inflammation, and an inert mode of treatment, laid the foundation for the uncommon appearances of the liver. Habitual excess in the use of ardent liquors, and acute inflammation, are generally considered the principal causes of those changes which lead to the formation of tubercles of the liver: but the tubercles thus produced vary materially in their character: those that are the offspring of long indulgence in spirituous drinks, are, perhaps, in a very great number of instances, of comparatively small size, and the natural bulk of the liver itself is, in these cases, diminished: on the other hand, those tubercles that seem to have been the result of inflammatory action, are of remarkably large size, and often occasion an astonishing increase in the growth of the liver. These facts are strikingly exhibited in the annexed plates.

I have denominated the large white masses found in the liver depicted in plate second, figures one and two, *tubera*, conformably to an arrangement lately proposed by Dr. Farre, of London, who has furnished so clear and interesting a description of these morbid bodies in his elegant work, the *Morbid Anatomy of the Liver*.* How far the tubera I have endeavoured to describe, bear a resemblance to the character of the *tubera circumscripta* of Dr. Farre, is left to the decision of the reader.

* Fasciculus I.

IV. CASE *of* TUBERCLES *of the* LIVER.

PLATE SECOND, figure the third, exhibits that peculiar state of the liver which is the frequent consequence of a too liberal and long continued use of ardent and vinous spirits. The tubercles, in this case, are of small size; some not larger than the twelfth of an inch in diameter, others about the size of a common garden pea, or rather larger, and occupy the liver throughout its substance. These bodies, when cut into, according to Dr. Baillie, are found to consist of a brownish or yellowish white solid matter: in the instance before us, they were of the latter sort.

The subject of this disease was the late GEORGE FREDERICK COOKE: the causes which led to the formation of this condition of the hepatic viscus, are equally well known as the professional eminence of this celebrated tragedian. In order, however, to render the present case more satisfactory, it may not be improper to insert some few particulars relative to the last illness of Mr. Cooke, and the account of morbid appearances as observed upon inspection after death. These I have extracted from the letter of Dr. Hosack, addressed to William Dunlap, Esq. the biographer of Cooke, and published in his *Life*, volume the second, to which work reference may be made for more ample details.*

Sept. 1812. "At that time," says Dr. H. "his abdomen had become very much enlarged, attended with great hardness in the region of the liver, and a sensible fluctuation occasioned by water in the cavity of the belly. His bowels, at the same time, were in a constant state of constipation, except when excited by the most drastic purgatives. His lower extremities were also anasaralous, and a general yellowness was diffused

* See also *American Medical and Philosophical Register*, vol. 4.

over the surface of the body, all evidently pointing out the deranged condition of the liver, as well as the debilitated state of his whole system."

"On the 17th of September I was again called upon to see Mr. Cooke, in consultation with Dr. McLean. Mr. C.'s strength was now so far expended, that we found it impossible to prescribe any thing that was likely to prove useful for the removal of his disease: we, therefore, from this period, directed our attention chiefly to the relief of particular symptoms, as they occasionally appeared during the progress of his complaint. On the evening of the 25th, he was seized with sickness at the stomach, which was soon succeeded by violent vomiting, and the discharge of a large quantity of black grumous blood; by this evacuation his strength was suddenly exhausted; but the vomiting was at length allayed by a mixture of laudanum and mintwater. Mr. Cooke, however, survived until six in the morning, when, in the full possession of his mental faculties, and the perfect consciousness of his approaching change, he calmly expired."

ACCOUNT OF MORBID APPEARANCES.

"A few hours after his death, having obtained permission, I examined the body for the purpose of ascertaining the state of the abdominal viscera, and especially that of the liver. Upon opening the belly, we found it to contain about six quarts of water; but the liver, to our great surprise, did not exceed the usual dimensions of that viscus; it was, however, astonishingly hard, and of a much lighter colour than is natural to that organ; its texture, too, was uncommonly dense, making considerable resistance to the knife; in its internal structure, it was so hard and unyielding, that very few traces of its vessels could be found, and the circulation through it had evidently long since ceased to be regularly performed: it exhibited precisely that peculiar *tuberculous*

appearance, which was first pointed out by Dr. Baillie, of London, in his *Morbid Anatomy*.* It also deserves to be remarked, that in the case of Mr. Cooke, as in those described by the distinguished anatomist referred to, the tubercles were not confined to the surface, but extended throughout the greater part of the substance of the liver, as I ascertained by making several sections of it in different directions. The other viscera of the abdomen exhibited no departure from their natural condition, either in their structure or appearance."

EXPLANATION OF THE PLATES.

PLATE I.

Figure 1.—Represents the most striking appearances connected with the morbid condition of the Œsophagus. (*Case 1st.*)

A A A.—The ulcerated portion of the Œsophagus.

B B.—The ulceration of the Œsophagus producing a deep sinus.

C.—The ulcerous erosion in that portion of the Œsophagus where an opening existed between it and the trachea.

D D.—The strictured part of the Œsophagus with its thickened edges.

E.—The strictured part of the Œsophagus laid open.

F.—The tubercle situated directly above the stricture.

* See Baillie's Engravings, p. 101—2.

G.—That part of the Œsophagus which is below the stricture, laid open, and of a natural appearance.

H H.—The stomach.

I.—The aorta attached to the Œsophagus.

Figure 2.—Illustrates the scirrhus of the pylorus, a part of which is advanced to suppuration. (*Case 2d.*)

A.—The duodenum below the strictured part.

B B.—The thickened portion of the pylorus.

C.—The ulcerated part of the scirrhus.

D.—A portion of the stomach in its natural state.

PLATE II.

Figures 1 and 2.—Represent the liver tuberculated. The liver in this case much enlarged. (*Case 3d.*)

Fig. 1.—Is a section of the liver exhibiting its superior or convex surface vested with tubera.

A.—The cut edge of the liver.

B B B.—The superior surface of the liver studded with tubera.

Fig. 2.—Is a perpendicular view of the same section of the liver.

A A A.—The tubera of largest size.

B B B.—The substance of the liver between the tubera.

C.—A blood vessel.

Figure 2.—Exhibits that condition of the liver which frequently arises from long indulgence in the use of ardent liquors. The liver in this disease is preternaturally diminished. (*Case 4th.*)

A.—The convex surface of the liver.

B.—The cut portion of the liver.

For the drawings whence the engravings illustrative of these cases of morbid anatomy have been made, I am indebted to the kindness of James Inderwick and David H. Fraser, of the Medical Department of the United States' Navy, and John W. Jarvis, Professor of Painting, New-York.

JOHN W. FRANCIS.

New-York, June 6th, 1815.

FINIS.

Fig. 1.

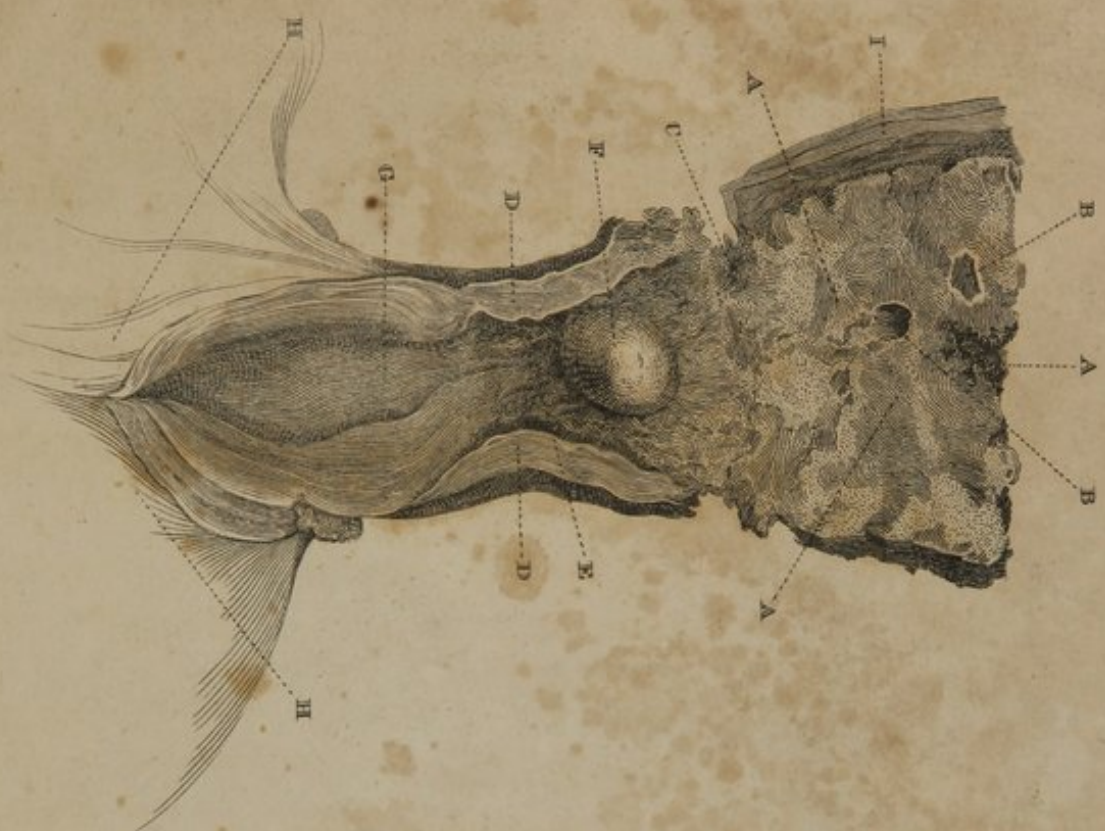
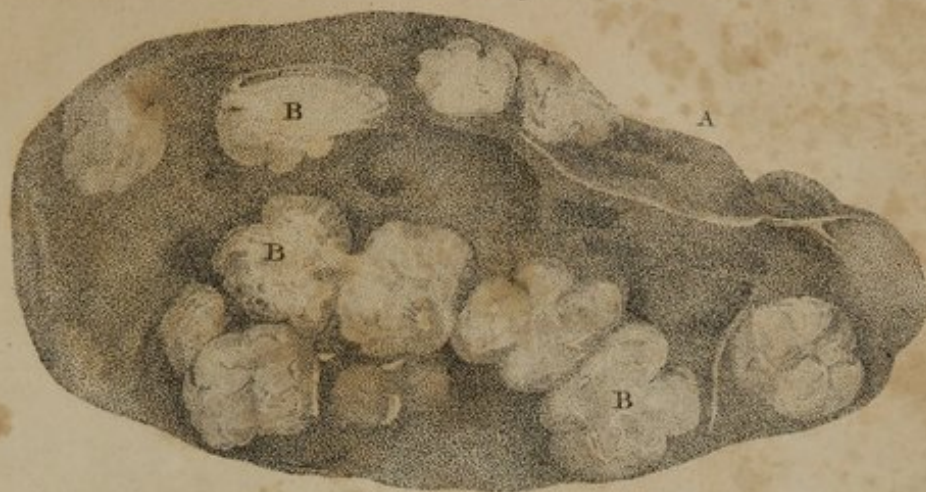


Fig. 2.



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