

The morbid anatomy of the liver : being an inquiry into the anatomical character, symptoms and treatment, of certain diseases which impair or destroy the structure of that viscus / by J.R. Farre.

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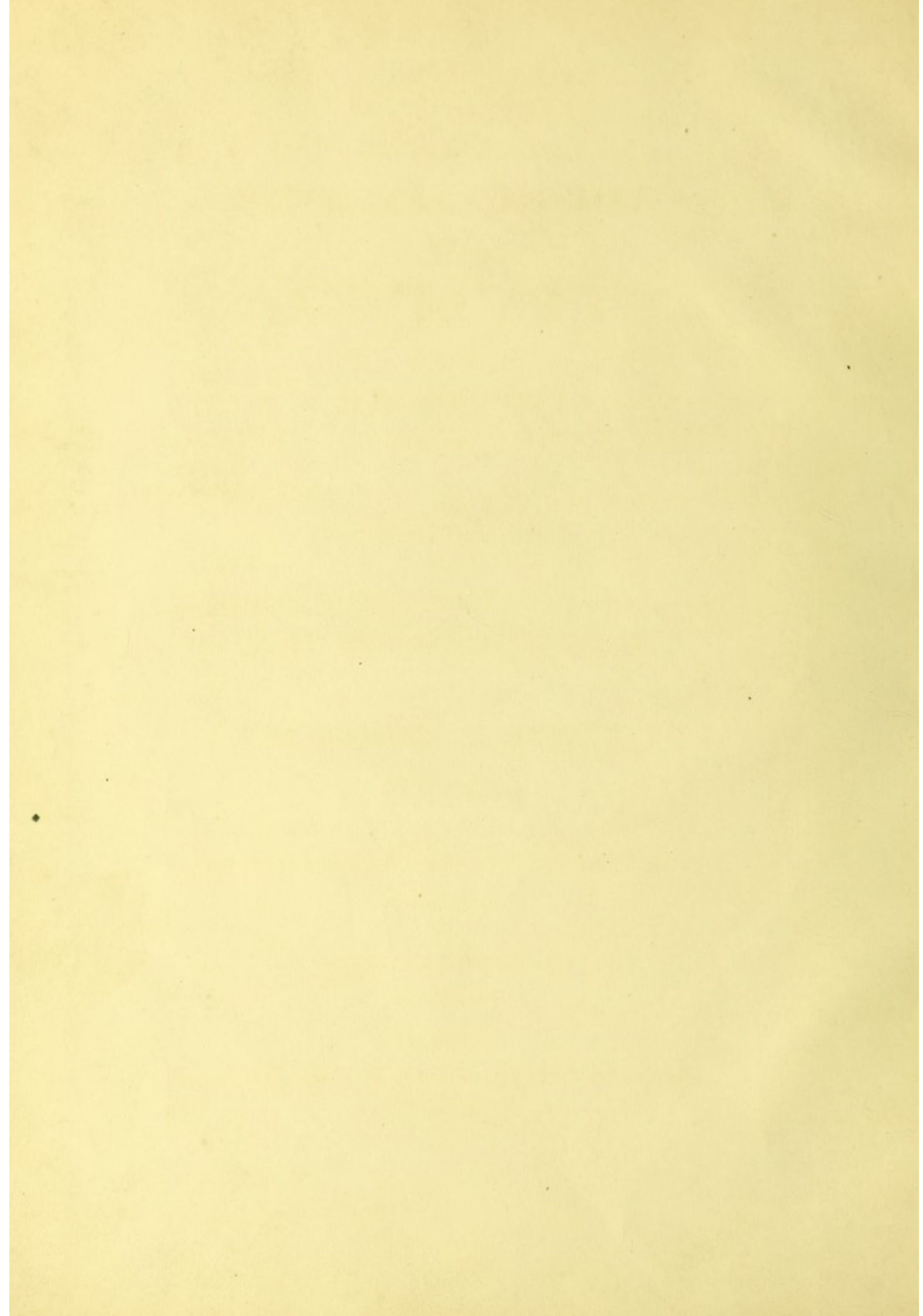




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THE
MORBID ANATOMY
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THE LIVER;
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INTO
THE ANATOMICAL CHARACTER, SYMPTOMS,
AND TREATMENT,
OF
CERTAIN DISEASES WHICH IMPAIR OR DESTROY
THE STRUCTURE OF THAT VISCUS.

ORDER I. TUMOURS.

PART II.

ON
THE VARIETIES OF THE TUBERA DIFFUSA.

BY
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INTRODUCTION.

THE following work will, at present, be limited to the investigation of Tumours, Scrofulous Affections, and Inflammation of the Liver.

The structure of the Liver is impaired in different modes by these diseases, for Tumours are chiefly injurious to it by their unlimited powers of growth or multiplication; but Inflammation simply disorganizes the Liver by obliterating its structure. Hence the ultimate state of the former, is the utmost degree of enlargement which is compatible with life; of the latter, rather a reduction of bulk, but an increase of solidity. Scrofula only proves destructive to the structure of organs when its Tubercles inflame: the disorganizing effect of this disease upon the Liver is therefore analogous to that of Inflammation.

These Changes of Structure will be illustrated by Coloured Engravings, so highly finished as to present faithful pictures of the morbid appearances. The anatomical character and symptoms of the diseases, accompanied with a series of Cases, will be given, and the Particular Cases from which the drawings have been made will most commonly be selected.

Morbid Anatomy, considered only as a part of natural history, is an interesting study; but it conduces to a more important end, when, by a combination of the histories of cases with the representations of the corresponding morbid appearances, it affords a standard of comparison and an instrument of research to the younger members of the profession. The author was forcibly impressed with the importance of this combination, on comparing the opposite methods of two distinguished writers on this subject—Morgagni and Baillie. But besides yielding a knowledge of the palpable forms of disease, this method, if diligently and fully pursued, is

capable of putting to the test the powers of medicine, and of preventing the multiplication of error by partial observation. Thus the contrast of the incurable with the curable forms of disease may be applied to a practical purpose of the greatest utility, when, by the conjoined labours of the profession, the characters and symptoms of diseases shall be farther developed, and nosology shall receive the last improvement of which it admits.

TUMORES.* Swellings, either circumscribed or diffused, generally differing in structure from the natural textures of the affected organs, and increasing in bulk by an inherent growth.

TUBERA.† Tumours of a cellular structure and fungous nature, producing, in general, remarkable elevations on the surfaces of the affected parts.

TUBERA CIRCUMSCRIPTA.‡ Tubera determinate in their figure, and limited in their seat chiefly to the liver.

TUBERA DIFFUSA. Tubera indeterminate in their figure, diffused through the affected organ, or dispersed in many textures of the body.

* The word Tumour, in its medical sense, is very indefinite, importing simply increased bulk; for thus Morgagni uses it, when he treats of diseases both of the liver and spleen under the common head of tumour and pain of the hypochondria. Thus also it is more extensively applied by Linnæus, Vogel, and Cullen. But its meaning, in this work, is nearly restricted by the above definition to that sense in which it has been lately employed in surgery: viz. to "such swellings as arise from some new production, which made no part of the original composition of the body."—Mr. Abernethy's *Surgical Observations on the Classification of Tumours*, p. 6. Edit. 1804.

† Sauvages and Sagar have constituted Tubera an order of their class Cachexiæ; but they both use this term only in the sense of protuberances, by no means intending to express the nature of the diseases, for they have arranged under it the most dissimilar genera.

‡ *Synonym.*—The Large White Tubercle of the Liver.—Dr. Baillie.

Morbid Anatomy: chap. IX. p. 217. 3d. edition.

————— Engravings, 5th Fasc. Pl. III. Fig. 2, 3.

It is with extreme reluctance and diffidence that the author ventures to propose another name for this disease, but the epithets "large white" are not characteristic, being common to both species, and belong indeed in a more remarkable degree to Species II. It seemed to him also objectionable to apply the term, Tubercles, indifferently to these large tumours, to certain irregularities of surface produced by chronic inflammation, and to scrofula.

ORDER I. TUMORES.

I. TUBERA.

NUMEROUS Tumours in the Liver, approximating in character, and evidently allied in kind, are arranged under this simple generical term, which is selected, because it not only expresses the diagnostic sign, that chiefly serves to distinguish them from other diseases, but also indicates their fungous nature.

To one species of these tumours, termed, in this work, *Tubera Circumscripta*, the liver seems to be principally subject; but by the other species, named *Tubera Diffusa*, the various textures of the body are as liable to be infested as the liver itself.

I. TUBERA CIRCUMSCRIPTA.

CHARACTER. Their colour inclines to a yellowish white, they elevate the peritoneal tunic of the liver, and their projecting surfaces, slightly variegated with red vessels, deviate from a regular swell by a peculiar indentation at or near their centres, which are perfectly white and opaque. They vary much in size,

which depends on the duration of each Tuber ; for at its first appearance it is very minute, but during its growth it assumes the character above described, and at its maturity exceeds an inch in its diameter. They adhere intimately to the liver, and their figure is well defined. In the interstices of the Tubera, the liver is paler and more flabby, its cohesion is weaker than natural, and slight effusions of blood are sometimes found. They commonly remain distinct at the surface of the liver, but internally they ultimately coalesce, and form immense morbid masses which pervade its substance. The patient often lives until the mass occupies the greatest part of the abdomen, and the natural structure of the liver is nearly supplanted. They possess so close a cellular structure, that the section of them, at first view, appears solid and inorganic ; but on the edge of the knife, by which they have been dissevered, an opaque white fluid, of the consistence of cream, is left, and a fresh portion of this fluid is gathered on it at each time that it is repassed over the surface of the section. Their cellular structure becomes more apparent after long maceration.

SYMPTOMS. The patient suffers pain in the region of the liver, languor, loss of appetite, and cough ; but until the liver, by the growth of the Tubera, descends below the hypochondria, a distinct judgment of the case cannot be formed : then the functions of the alimentary canal are more impaired, the body wastes, and the enlargement of the liver, its hardness and remarkable irregularity of surface, may be distinguished through the

parietes of the abdomen. In the advanced stage the patient is distressed by its enormous bulk, the respiration is oppressed, the bowels are prone to diarrhoea. Neither jaundice nor serous effusion into the peritoneum are symptomatic of this disease : they may be conjoined, but it is an accidental circumstance, rather than a necessary consequence.

CASE I.

Mr. W., at the age of sixty years, complained of languor, loss of appetite, pain in the region of the liver, and cough. Of these symptoms the two first long preceded the direct signs of hepatic disease. For twelve years he had eaten sparingly, and his beverage had been porter, or, occasionally, a little wine ; but in his youth he had been less temperate. During the last twelve months he had always gone to bed immediately after dinner, complaining of great languor. For many years he had been subject to frequent fits of gout, which usually lasted six or eight weeks. He had been accustomed to use spice freely, and to take large doses of guaiacum and opium in tincture.

It was in April, 1805, that the distinct symptoms of hepatic disease appeared ; but, disregarding them, he continued to pursue his mercantile concerns until September. On the tenth of that month he sought medical aid. His symptoms, at that time, were the following : great fulness, and dull pain of the right side, much increased by pressure on the epigastrium ; considerable hardness and irregularity of the epigastric, right umbilical, and

iliac regions ; difficult respiration, cough, and expectoration of a viscid mucus ; inability of lying in the horizontal posture ; frequent pulse, pale urine, torpid bowels.

He was first purged with neutral salts in an infusion of senna, and then directed to take a grain of the submuriate of mercury night and morning. His bowels being too much affected by the internal use of mercury, it was omitted, and, in its stead, half a drachm of the strong mercurial ointment was rubbed in every night. His mouth became sore in a week. Although his pain and dyspnœa were somewhat relieved, his strength decreased. At the end of a fortnight his urine deposited a lateritious sediment, and his stools were thin, fetid, clay-coloured, and numerous. The acetate of potash in an infusion of gentian, and subsequently the decoction of cinchona with an opiate at night, were prescribed. In this state, and under this treatment, he continued three weeks longer. A large blister was then applied to the region of the liver, and a drachm of the sulphate of magnesia in a decoction of taraxacum was given to him thrice a day. The increased frequency of evacuation from his bowels forbade the continuance of this medicine. It was changed for the chalk mixture with aromatic confection ; but the diarrhœa continued, and was now accompanied with enfeebled pulse, frequent cough, dyspnœa, œdematous swellings of the lower extremities, brown tongue, aphthæ, singultus, and at the end of another week, being the sixth from his confinement, he died.

This patient had been under the care of an experienced

surgeon and apothecary, and was also subsequently attended by an eminent physician. The author was requested to conduct the examination of the body.

Inspection on the 25th of October, 1805, thirty-eight hours after death.

External appearances. The body was emaciated, the abdomen tumid, and irregular to the touch on the right side, the skin sallow, but not jaundiced.

Abdomen. The liver, on account of its prodigious size, and the previous history of the case, first attracted our attention. The right lobe occupied the whole of the right hypochondriac and iliac regions, and covered the right kidney; and its edge, which is usually seen just within the margin of the ribs, rested in the hollow of the right ilium. The left lobe spread over the stomach and touched the spleen, but was not enlarged in proportion to the right: its surface was almost free from preternatural adhesions, but the right lobe adhered extensively to the peritoneum lining the diaphragm, which was pressed upwards so considerably, as very much to diminish the capacity of the right side of the thorax. Numerous Tubera, of a yellowish white colour, appeared on each lobe, projecting a little from the surface of the liver except at their centres, which were commonly depressed: many were distinct, and of various sizes, others were confluent and formed extensive morbid masses. From the dissevered surfaces of the Tubera a whitish fluid, as thick as cream, could be scraped: indeed, the tumours consisted of this

matter, contained in a close cellular structure, which readily broke down under pressure. Although many sections were made, yet few vessels appeared in the Tubera: in the interstices the liver was paler than natural, flabby, and easily torn by a slight pressure of the finger. In a few of these interstices slight effusions of blood were seen. The gall-bladder contained a small quantity of high coloured bile, and five gall-stones, of which the largest weighed four scruples. The common duct was much enlarged, and its capsule thickened. The alimentary canal was carefully examined. The inner coat of the œsophagus was darker than natural. A portion of the left extremity of the stomach, near the cardia, larger than a crown piece, was reduced to a thickened, white, pulpy mass, its natural structure being completely destroyed. Its circumference was extremely red, but the florid colour extended only over the left extremity of the stomach. To the peritoneal tunic of the stomach, directly opposite to this altered portion of the mucous and muscular coats, a small scirrhous tumour adhered. The intestines had a natural appearance, but the mesentery and meso-colon were uniformly thickened. The spleen was not enlarged, its peritoneal tunic was here and there thickened with patches of lymph, and partially adhered. The kidneys were small and unusually soft. A very inconsiderable quantity of serum, not exceeding eight ounces, was effused into the cavity of the peritoneum.

Thorax. The heart and lungs were perfectly natural in their structure. There were partial adhesions of each pleura, but

these had not recently taken place. About four ounces of serum were collected in the cavities of the chest.

CASE II.

Mr. D., aged thirty-nine years, a man of large stature, formerly a wine-cooper, latterly a publican, had been, for many years, the subject of irregular gout, which had finally made him lame in the feet, and had occasioned some of the usual depositions about the joints of the fingers. To the same disease, improperly perhaps, had been imputed severe paroxysms of pain in the epigastric region, which recurred at irregular intervals. To relieve these pains he had usually taken a warm purgative tincture. His earlier habits had been intemperate, but of late he had been more moderate in the use of fermented liquors. At the close of the year 1810, he became more indisposed, and attributed his symptoms to cold. He was affected with cough, and uneasy sensations in the epigastric, and right hypochondriac regions. On the 28th of March, 1811, the physician who was consulted, carefully examined the naked abdomen, the patient being placed in a horizontal posture. The liver projected into the umbilical region. The whole space of the abdominal parietes, which is between the umbilicus and the margin of the thorax, was tumid and hard, presenting a surface irregular from Tubera, which could be distinctly felt under the integuments. The patient positively affirmed, that he had noticed the enlargement only six weeks before this period. He had cough and dyspnoea, but not in a

greater degree than it was fair to impute to the great bulk of the liver; his pulse was natural, his appetite defective, his bowels rather torpid. There was no obstruction to the circulation of blood through the liver, for there was no effusion into the peritoneum, nor to the flow of bile, for the skin and urine were not in the slightest degree jaundiced. Very little was attempted by medicine, except to regulate the bowels by rhubarb, and to allay pain or procure sleep by opium. In the month of April he still attended to his business, and was strong enough to go up and down two pair of stairs without assistance. On the 31st of May he was seized with a suppression of urine, which was removed by a full dose of opium. Early in June a recurrence of this affection, in a slighter degree, yielded to the same remedy. In this month serum was effused into the peritoneum. The quantity was inconsiderable, but this superficial interposition of a fluid between the peritoneal tunic of the liver and the other peritoneal surfaces, so much diminished the uneasy sensations which he had before felt, that the opiate was now less indicated to relieve pain, than to control a diarrhoea under which he began to suffer. The enlargement of the liver had been progressive, and the gibbous edges of its right and left lobes were, at this time, felt much below the umbilicus. Now the functions of the alimentary canal were badly performed: his tongue was red and glossy, and his appetite failed. His pulse became frequent, his dyspnoea and cough increased, he expectorated thickened mucus, sweated profusely, wasted rapidly, and was incapable of helping himself. In

this state he lingered through the latter end of June, and died on the 5th of July, 1811.

The body was examined on the following day.

Abdomen. The liver occupied the hypochondriac, epigastric, and umbilical regions. A line drawn across the anterior superior spinous processes of the ilia would have defined its extent, so that, a few convolutions of the small intestines in the hypogastric region excepted, the diseased liver alone appeared after the section of the abdominal parietes had been completed. The liver was removed. Its surfaces were covered with Tubera: more than fifty were counted on its concave surface, and on its convex surface there was a still greater number. All these tumours had the same character, (see Plate I.) viz. a circular margin, elevated, firm, and white, with a depressed and very white centre, resembling a cicatrix. The only deviation from this character was occasioned by a coalescing of two Tubera, by which their figure was changed to an irregular oval. Besides these mature Tubera, a countless number of them in their incipient state appeared in all directions. Sections of the liver exposed the bodies of these tumours, which were of various sizes, and were readily distinguished from the natural structure by their yellowish white colour. From their cut surfaces a thick fluid could be scraped. The hepatic artery was enlarged, the vena portæ and venæ hepaticæ were natural, the hepatic duct was dilated, and tinged yellow, the cystic duct was contracted, the gall-bladder was elongated, and contained a little bile. The mucous coat of the

stomach, and of some portions of the intestinal canal, had an erythematous, but no where an ulcerated appearance. The fæces were of a pale yellow colour. The spleen was simply enlarged to four times its natural size. In the pelvis of the left kidney a small calculus rested. The quantity of serum effused into the peritoneum was very inconsiderable.

Thorax. The structure of the lungs and heart was perfectly natural. The internal coat of the aorta was of a dark red colour; an appearance after death, which has been confounded with inflammation.

These cases are offered as good examples of the Tubera Circumscripta. I have met with only one variety, differing chiefly in the size and consistence of the Tubera, which were smaller and firmer.

This disease has been named by Dr. Baillie, the large white Tubercle of the Liver, and of its nature he offers the following opinion: "It resembles more the ordinary appearance of scirrhus
" in other parts of the body. In one or two instances of it, how-
" ever, I have observed a thick sort of pus, resembling very
" much the pus from a scrofulous sore; and therefore I am rather
" disposed to think that this tubercle may be of a scrofulous
" nature."

I have the record of two cases of this disease in which the mesenteric glands were scrofulous. But notwithstanding this evidence, and the very high authority to which I have referred, I am inclined to believe that the nature of scrofula is essentially

different from that of the Tubera Circumscripta, although the former may sometimes be conjoined with the latter, as it evidently is with other diseases.

This opinion is formed from the following circumstances:

First, the Tubera Circumscripta are distinctly allied to the Tubera Diffusa, which unquestionably fall under the tribe of fungous diseases.

Secondly, the Tubera Circumscripta differ from the Tubercula Strumosa in their character and termination. To enter farther into this subject would anticipate the character of the scrofulous Tubercle of the Liver, which will be described in a subsequent part of this work.

II. TUBERA DIFFUSA.

CHARACTER. These tumours not only pervade the substance of the liver in a distinct or in a confluent form, but also appear at its surface, elevating more or less its peritoneal tunic. They rise from the surface of the liver with a more gradual and uniform swell than the Tubera Circumscripta, and are, in different subjects, of various figures, sizes, colours, and consistence, often pulpy. No texture seems to escape the ravages of this fungus. It appears indifferently in all the viscera, in the cellular membrane, and even in the bones.

SYMPTOMS. These vary in proportion to the varied seats of the disease: the diagnosis, therefore, must depend on one of the circumstances from which its name is derived, viz. its dispersion through many textures of the body. But when this

disease affects the liver in particular, then the symptoms will not materially vary from those which accompany the *Tubera Circumscripta*.

In considering the varieties of this disease, which are many, it has been found difficult to mark the species ; but as they all agree in the co-existence of *Tubera* in different textures, it seemed less objectionable, in treating of the diseases of the liver, to select that form which is not only remarkable for its magnitude, but for its greater similitude to the *Tubera Circumscripta*.

CASE III.

A male adult was affected, in the autumn of 1809, with cough and diarrhoea, to which, after several weeks, succeeded an enlarged abdomen, depending partly on serous effusion into the peritoneum, but chiefly on the size of the liver, which descended below the umbilicus. Symptoms of hydrothorax supervened, and he died in the course of six months after the distention of the abdomen had commenced.

The case was treated by the internal and external use of mercury, by the nitric acid, by purgatives, by blisters, and finally by palliatives.

Dissection. The liver was tuberos, and enormously enlarged. The mucous coat of the stomach was affected with the same disease. Serum was effused into the peritoneum. The right pleura adhered. The pericardium and left pleura contained a serous effusion. These were the only morbid appearances.

For the above concise report I am indebted to a physician who observed the case, and conducted the dissection. He also did me the favour to send, for my examination, the liver and stomach. The weight of the liver exceeded fifteen pounds, and this remarkable increase of bulk depended on the growth of Tubera, which differed from the Tubera Circumscripta in the following circumstances. They were less numerous, for on the concave surface of the liver their number did not exceed twelve; they were as minute at their beginning, but at their maturity, considerably larger, their diameters being then rather more than three inches; at no period of their growth were they externally indented, but, on the contrary, they rose from the liver with a gentle and uniform swell, each being either round or oval; their external surfaces had a motley appearance, their white colour mingling with the brown colour of the liver, but a section (Fig. 1. Plate II.) displayed the appearance of the Tubera distinct from the substance of the liver, on which they seemed continually to encroach, and to approximate to each other by waving margins; their texture was coarser, but it yielded a similar whitish fluid. The vessels of the liver were not thickened, neither did the trunks of the artery, veins, or duct, present any thing worthy of remark. The gall-bladder and cystic duct were much elongated, and the former contained some bile of a yellow colour. From the mucous coat of the stomach, near the cardia, a cluster of Tubera grew, and projected into its cavity; but the disease in this organ was more incipient, did not interrupt the course of the alimentary matters,

and, being connected with such extensive hepatic disease, was not suspected.

The Tubera Diffusa are, in general, more speedily fatal than the Tubera Circumscripta, because many organs are, at the same time, oppressed by their growth. The chief character of this species, its dispersion through various textures, is strikingly illustrated by the following case, in which the liver, as far as a judgment could be formed from the relative size of the Tubera in the different textures, seemed to be the last organ affected: indeed, instances of this disease are not unfrequent, in which the liver is altogether free from Tubera, whilst other viscera are infested with them. The case also serves to shew the varying character of the symptoms which belong to this species.

CASE IV.

October 29th, 1808,—Diggins, a chimney-sweeper, aged twenty-eight years, was visited by a physician, who noted the following symptoms: violent pain of the head greatly aggravated by the slightest motion, pulse 144, white tongue, nausea, slight cough. His sufferings were, doubtless, severe; for whenever he moved, he cried out vehemently, and grasped his forehead and occiput. Independently of motion, an exacerbation of pain took place in the afternoon, about three o'clock, and continued several hours. He had been ill one month. He was directed to take two grains of the submuriate of mercury

every night, and half an ounce of the sulphate of magnesia every morning. November 1st. The medicine had purged him freely, but there was no amendment. The periodical returns of pain suggested a trial of the cinchona: it was freely given in substance. 5th. Pain of the head extreme, frequent vomiting, pulse 96: the bark was omitted, a large blister was applied to the scalp, two grains of the submuriate of mercury were given night and morning, and occasionally a draught with rhubarb and sulphate of potash. 7th. The blister had acted but slightly, the vomiting had ceased, pain more moderate, pulse 84: the mercury began to affect him, and he complained of pain in his jaws. 9th. Slight and occasional delirium, tenesmus: four grains of the submuriate of mercury were daily continued, and the aperient draught occasionally. 11th. Mouth very sore. 13th. Pain of the head insufferable and incessant: thirty-five drops of tincture of opium were given every night. 19th. Pulse 72: the opiate procured some sleep and respite from pain. As the mercurial action afforded no benefit, and he refused all nourishment in consequence of the soreness of his mouth, the mercury was discontinued. 21st. Bowels torpid, scarcely any nourishment taken: the opiate was omitted, and a solution of manna in an infusion of senna ordered. 23d. Pulse 72, pain at times as urgent as ever, bowels open, debility great. 24th. A blister was applied to the neck. 30th. Pain of the head less violent, bowels open, occasional convulsion, hands bent towards the fore-arm: he had taken, for the last few days, three grains of the mercurial pill with one grain of opium, night and morning, and fifteen drops of antimonial wine with

ten drops of tincture of opium, in a diluted solution of the acetate of ammonia, every six hours. December 5th. Pain of the head less, eyes suffused, delirium increased, pulse 120, urine and fæces passed under him, but with consciousness of their discharge: he was directed to take six grains of the mercurial pill with one grain of opium every night only, and ten drops of the tincture of digitalis in a diluted solution of the acetate of ammonia every six hours. 9th. He continued to decline from the 5th, without any other remarkable symptoms than those above mentioned, and died on this day.

December 12th. The body was examined.

Head. In the medulla of the left hemisphere of the cerebrum, there was a Tuber somewhat larger than a pigeon's egg. It was excessively vascular, of the colour of the cortical part of the brain, and thereby readily distinguished from the medullary, being also softer than it. In the posterior part of the same hemisphere a smaller tumour of the same kind was observed. Tubera had existed in the corpora striata, and very extensively in the cerebellum; but sections of these parts discovered little besides numerous red vessels nearly bare from the dissolution of the Tubera, of which the boundaries were distinctly marked by the firmness of the surrounding parts. The colour of the pulpy contents of these last mentioned tumours was scarcely to be distinguished from that of the medulla: indeed, a gentleman present supposed that the brain had supplicated in these parts, but the appearance seemed to be the result of a dissolution of the Tubera. The ventricles were filled with a limpid fluid, and a greater number of red vessels than usual appeared on the investing membrane.

Neck. Under the left angle of the inferior maxillary bone, a large Tuber occupied the seat of a lymphatic gland.

Thorax. The right bronchial glands were much diseased, and one of them formed the nucleus of an immensely large Tuber, which in character very closely resembled that of Fig. I. Plate II. Surrounding this morbid growth the lung had inflamed, and numerous small vomicæ had formed: the pleura adhered extensively and intimately. The heart and left lung were not diseased.

Abdomen. In the liver there was a single Tuber, which in structure resembled that in the lung. To the adipose tunic of the left kidney, a Tuber, of eight inches in circumference, was attached. It much resembled brain in appearance, and seemed to correspond in vascularity with the Tubera discovered in the brain, but its texture was much firmer than theirs. The stomach and intestines, the spleen, pancreas, and kidneys were not diseased.

The investigation of Disease by Anatomy not only improves the diagnostic part of medicine by connecting, as far as it can be done, the sign with the morbid change, but it also improves the therapeutic, by gradually separating curable from incurable disease, or by indicating the stage at which the former is converted into the latter. It is therefore one important use of Morbid Anatomy, to point out the boundaries beyond which it is not only unavailing, but injurious for art to interfere, except to diminish suffering. I venture to oppose this truth to the reverse practice, apparently founded on a maxim, that if an organ be subject to many obscure diseases, of which one, or more, can be cured, but the others are incurable, then all should be treated like the curable disease.

Patients suffering under the diseases above described are not, as far as I have observed, benefited by the operation of mercury. Few medical men now attempt to cure by these means Tumours, in the restricted sense of that word, at or near the surface of the body; but it is more especially true that such efforts prove altogether fruitless when directed to the cure either of the Tubera Circumscripta or Diffusa; for by the time that the most careful examiner can distinguish them, the progress of the disease has been already so considerable, that the mercurial action tends only to exhaust powers, which art will subsequently in vain attempt to restore.

On a review of the method of treating Cases I. III. and IV., it appears that too much was done by ineffectual efforts to cure; but in Case II., a palliative plan, the result of a more correct diagnosis of the disease, was adopted from the commencement of the treatment. Thus medicine effected in this case all that was possible; it clearly diminished, but did not inflict any suffering. The erythema of the mucous membranes of the mouth and alimentary canal, and the diarrhoea which probably depended on it, instead of being hurried on in a distressing degree, were certainly retarded and moderated. This view of the subject is not derogatory; for the perfection of medicine consists, not in vain attempts to do more than nature permits, but in promptly and effectually applying its healing powers to those diseases which are curable, and in soothing those which are incurable.

PLATE I.

This plate represents a section of the liver described in Case II., and at one view illustrates the external appearance, and the internal structure of the Tubera Circumscripta. They are seen of various sizes from their incipient to their mature state. The posterior outline of the Figure displays remarkably well the marginal elevation of the Tubera, whilst the anterior part of it as strikingly shews the central depression of a white colour, which is characteristic of this species. Their external circular form, excepting where two Tubera have coalesced, and the manner in which they also coalesce internally, gradually supplanting the natural structure of the liver, are likewise accurately given.

PLATE II.

This plate represents two forms of the Tubera Diffusa, which, in internal character, approach the nearest to that of the Tubera Circumscripta.

FIG. I.

Is coloured after a painting of a thin section of the recent liver, described in Case III. This Figure displays the luxuriance of the Tubera Diffusa. A section of two of the tumours in different stages, and of part of a third, shews the manner of their growth and encroachment on the natural structure. Their coarser texture is represented by the darker touches on the white ground, which is the actual colour of the Tubera.

FIG. II.

Represents the first variety of the Tubera Diffusa, differing somewhat in its size, texture, and configuration. The description of the case will be given in the next number, which will treat of the varieties of the Tubera Diffusa.

THE VARIETIES of the Tubera Diffusa are numerous. It is not my intention to describe every variety which I have met with, nor even to name those which I shall describe. To over-charge the subject would, instead of assisting the student, tend only to confuse the diagnosis. It will be sufficient to illustrate by cases some of the most remarkable—those in particular which are distinguished by peculiarities in their anatomical characters.

If the genera of diseases are so closely connected, that it is extremely difficult to mark where the one is lost in the other; the species, and the varieties, are necessarily still more intimately linked together. Hence, though there is an obvious difference in the anatomical character of each species of Tubera, yet these characters gradually approach till they meet even in the same subject. The first variety, of which I shall give an example, will be found thus to connect the species.

II. 1. CHARACTER. Tubera, affecting different textures, viz. those of the liver and stomach;—elevated at the surfaces of the organs, *but not uniform in their figure, some rising with a regular swell into a round form, others acquiring a margin by being gradually depressed towards the centre*;—forming tumours without cysts, almost pulpy in their consistence, cellular in their structure, and containing an opaque white fluid.

SYMPTOMS. As the anatomical characters of both species are combined in this variety, so the symptoms are proportioned to the growth of the tumours in the respective organs. *With the addition of those signs which result from the affection of the stomach,*

the symptoms attached to the character of the *Tubera Circumscripta* will not only distinguish the genus, but also the species. Although they do not suffice to denote this variety, yet it is deemed important to record an example of it, for the reason above assigned: namely, a peculiarity in the anatomical character.

CASE V.

Mrs. —, æt. 45, married, had enjoyed a good state of health. For fifteen years she had not been confined to bed, except by parturition; and, even in the whole course of her life, had experienced only two fits of illness: viz. an attack of jaundice, and a severe pleurisy. Although she had always been accustomed to great exertion, her habits were uniformly and exceedingly temperate. During pregnancy she was subject to a pain of the left side, which, when severe, was attended with a cough, and was generally relieved by bleeding.

In the latter end of 1813, after nursing her sixth child for twelve months, the disease, which proved fatal to her, commenced with dyspeptic symptoms. These were very much aggravated after taking food, and always became worse at night; especially a burning in her stomach, and a pain extending to her shoulders. Towards the evening she was obliged to unlace her stays, and to remove every thing that pressed on her chest or abdomen. The disordered state of her health induced her to wean her infant, and the change at first seemed to be

beneficial; but the unfavourable symptoms soon returned, and her bowels became constipated. About Christmas, in the same year, she was attacked with violent palpitation, which frequently returned, and was attended with alarming faintings, sometimes thrice in a day. Notwithstanding this disturbed action of the heart, the pulse was not affected in the intervals of palpitation, and she had no dyspnœa, except on going up stairs. She occasionally felt pain in her left side, and, in the course of her complaint, was affected with a dry cough. Although the cough subsided, yet a wasting of the body and extremities commenced. On the 12th of April, 1814, the liver was felt extending below the right hypochondrium, and into the epigastric region. At that examination it could only be ascertained that the liver was enlarged; but after that period the character of the disease was developed by its rapid growth; for, on the 18th of the same month, Tubera were distinctly felt on its surface. On the 21st, the edge of the liver was already below the umbilicus, and on the 27th, the Tubera were still more distinct. She compared them to eggs, and said she could distinguish the rise of the tumours by the exquisite pain and tenderness which attended their rapid growth. She now could not lie on either side, and was easy only in a particular position on her back. She frequently vomited, especially when the pain was aggravated. By the advice of a Physician, who attended her at the commencement of her disease, she took five grains of the mercurial pill every night, and occasionally a gentle purgative. A progressive ema-

ciation, and a decided appearance of Tubera, induced him to give up the use of mercury. A Surgeon, who first examined the region of the liver on the 18th of April, and again about ten days afterwards, gave it as his opinion, that the liver, in that short period, had acquired an addition of bulk equal to, at least, five pounds. By his advice, the use of the blue pill was resumed for a time ; but the distress of the stomach increasing, only those medicines, which were calculated to diminish suffering, were administered. The volatile saline draught, and the super-carbonated soda water, mitigated the dyspeptic symptoms, and an occasional opiate diminished pain. An attempt to retard the rapid growth of the Tubera, by a very dry diet, was made, but without the slightest benefit. During that trial, thirst was assuaged by occasionally moistening her mouth with a small quantity of a vegetable acid. On the 2d of May it was noted, that the liver continued to increase in bulk, that her strength declined, that a slight effusion of serum into the peritoneum had taken place, and that her urine was scanty, turbid, and of a pink colour. Her pulse was 96. Her stomach retained both nutriment and medicine, by aid of the volatile saline draught, the alkali being rather in excess ; and her bowels were gently opened by small doses of rhubarb and sub-carbonate of soda. On the 6th, the effusion into the peritoneum had increased. She was enabled to move much better, and again to lie down on her right side. She also now more frequently retained her food ; but wasted in as rapid a proportion as the Tubera increased. Pre-

vious to the interposition of a fluid between the peritoneal surfaces, the pain excited by the act of vomiting was extreme ; but after the serous effusion had taken place, the vomiting did not produce pain, and, indeed, afforded such immediate relief to the stomach itself, that she was tempted occasionally to excite it by irritating the fauces with her finger. As both these changes occurred as soon as the fluid could be detected in the cavity of the peritoneum, it is probable that this effusion relieved, by diminishing the friction to which the peritoneal surfaces investing the Tubera had been previously exposed in the acts of moving and vomiting. Her bowels were now easily acted on, even by magnesia, and became disposed to diarrhæa. She was compelled to take an opiate every night. A feeble menstrual effort appeared on the 8th. Hitherto this uterine function had been regularly performed, even when she suckled her last infant. Her constitution in this respect had undergone a change, for the monthly periods had always been interrupted whilst she nursed her former children. Her tongue, although clean, was often dry, and her thirst was very great. The fluids ejected from the stomach had a dark or coffee-coloured appearance. Vomiting now always relieved her ; for the retention of food produced increased pain of her left side, with a sense of burning and flatus. She also complained of great pain in her back, and between her shoulders. Although she became very faint on sitting, yet she continually solicited to be taken out of bed, as that position diminished her sufferings.

Her legs began to swell. On the 10th they had become very œdematous ; but the skin and tunica conjunctiva, both now, and through the course of her disease, remained perfectly free from the slightest bilious tinge. At this time, indeed, there seemed to be no secretion of bile, for the fæces were white, an appearance which had not before been observed. She was examined this day by an old Physician, who gave it as his opinion, that mercury was the fit and only remedy. Another medical gentleman, who did not see her, but merely heard that she had an enlarged liver, sent to assure her husband, that, in such a case, “mercury was the sheet anchor.”

The short term of life that remained was a period of great suffering, which palliatives failed to mitigate. The sensations of heat and pain in the region of the stomach became continual. To these were added violent pains in the hips, and a sense of suffocation, shewing that the irritation and pressure extended from the diaphragm to the pelvis. Dryness of the tongue, peculiar irritations in the nose, distressing sensations in the ears and throat in swallowing, and occasional hiccough, denoted the final change in the condition of the mucous membranes. Her mind, which had hitherto manifested the most exemplary fortitude, now wholly absorbed in its own suffering from unceasing bodily pain, became regardless of all other objects. After remaining two days in this unhappy state, she died on the 16th, and her body was examined on the 19th of May.

External appearances. The countenance had taken on the appearance of old age. The superior extremities and chest were much emaciated; but the abdomen was tumid, and the lower extremities were very oedematous.

Abdomen. The liver descended nearly to the pelvis. The left lobe was diseased in the greatest degree, scarcely a portion of the natural structure remaining; its place was more than supplied by Tubera. These unequally distended its surfaces; but left its edge thin and flowing. Although the disease had made less progress in the right lobe than in the left, it was notwithstanding diffused over a considerable part of its texture. The structure of the Tubera was cellular, not encysted, and the cells contained the usual cream-like fluid. The external surfaces of most of the Tubera were uniformly elevated, or round; but some, on the contrary, were depressed in the centre, or indented, as in the Tubera Circumscripta. The gall-bladder was contracted on biliary concretions of various sizes, and the cystic duct was impervious. The lymphatic glands about Glisson's capsule, and between the liver and stomach, were considerably enlarged by the progress of this disease; and from the mucous coat of the stomach, near its pyloric extremity, a large, flattened, or slightly concave Tuber grew. The rest of the abdominal viscera were not diseased. The peritoneum contained an inconsiderable quantity of serum.

Thorax. Adhesions of the pleura on the left side of the chest confirmed the report of a pleuritic attack which she had suffered many years before. The lungs were sound. The pericardium contained only the usual quantity of serum. The size of the heart, its tricuspidal, mitral, and semi-lunar valves were perfectly natural. A trivial effusion of blood appeared under a small portion of that part of the pericardium which is reflected over the heart. A small swelling near the trachea proved to be a lymphatic gland, altered in its structure, but not affected with the disease above described.

In Plate II. Fig. 2, I have represented what at that time appeared to be the first variety of the Tubera Diffusa. Further observation has induced me to mark it as the second variety.

II. 2. CHARACTER. Tubera affecting different textures, elevated at the surfaces of the affected organs, *encysted*, or *having distinct cells*, formed by the growth of a fungus, which separates in flakes, and is composed of a fine reticular texture, containing an opaque white fluid.

The symptoms may enable us to mark the species, but not this variety. It is recorded for the peculiarity in its anatomical character, which connects it with some of the remarkable varieties that follow; namely, its having cysts or cells for the attachment of the fungus, whilst the other parts of its character shew its relation to the species under which it is arranged.

CASE VI.

In March, 1808, I obtained from a friend the recent specimen of this Tuber, represented by Fig. 2, Plate II. together with the following particulars.

Mrs. W. æt. 48, spare and diminutive in her figure, and temperate in her habits, had complained, for the preceding two or three years, of pain in the epigastric region; and, during the last twelve months, although her bowels continued regular, she was affected with frequent vomiting. Within the last three months, ascites and slight symptoms of jaundice had taken place; but for a month previous to her death, the yellowish state of her skin and tunica conjunctiva had disappeared. She said, that every medicine which she took, served only to increase the pain of her stomach. The continual suffering of this organ was expressed by her constant employment of gently rubbing the epigastric region with her hand. Her respiration was little affected; her pulse was small and quick; and her debility great.

Dissection. The liver was not remarkably enlarged, which it almost uniformly is in these cases; but its external surface was irregular, from numerous Tubera, and its internal substance was filled with those tumours. Some of the Tubera had distinct cells, or even cysts, which contained a white substance, of the consistence of cheese, capable of being separated in flakes. From the surfaces of the Tubera, after a fresh section, a white fluid, as thick as cream, could be scraped. A portion of the tumour, after many days' maceration, presented a fine reticular

texture as the structure of the Tubera, in which that fluid was contained. The mucous coat of the stomach, near the pylorus, had an irregular Tuber growing from it. The peritoneum contained about six pints of serum. In the thorax, the only morbid appearance was a general adhesion of the pleura of the left lung to the pleura costalis.

II. 3. CHARACTER. Tumours, rising with a regular swell from the surfaces of the affected parts, and *yielding to the touch*; composed of a very delicate reticular texture, *pulpy in its consistence*, varying in its colour, even in the same subject, charged with an opaque fluid, and *growing from cysts, or cells*.

SYMPTOMS. This variety can be distinguished from the preceding varieties of Tubera, only by the pulpy consistence of the tumours, which impart a sensation resembling, in some degree, what is experienced when a swelling, that contains a deep-seated fluid, is touched.

In all the instances of this variety which the author has observed, the tumours affecting the liver were secondary. The primary tumours commenced either in distant organs, or in cellular membrane. If he had considered the structure of only the primary tumours, he should have been compelled to subdivide this variety; for in some the fungus grew from the *exterior surfaces of cysts*, which were filled only with a fluid, varying in its colour and consistence; whilst in others, the growth of the fungus was limited to the *internal surfaces of the cysts*, and the fluid was diffused through its spongy texture:—but in the secon-

dary tumours formed in the liver, the fungus was attached *only to the interior* of cysts or cells, and thus these variations in the primary Tubera were lost in the character common to the secondary.

The preceding varieties are found chiefly, if not exclusively, in the adult, and especially in the middle or advanced periods of life; but from the variety II. 3. no age is exempt. It occurs at least as often in infants and children as in adults. Whilst no texture, cartilage perhaps excepted, escapes its ravages, it most frequently commences in the internal tunics of the eye, in the female breast, and in the testicle. In the latter, indeed, it has long been described, by the principal Lecturers on Anatomy and Surgery in the metropolis, under the name of the *pulpy* testicle.

CASE VII.

On the 7th of January, 1806, a medical gentleman was called to an infant, three months old, who was affected with a vomiting, which he attempted to relieve by aperient and absorbent medicines. On the 11th, a continuance of the vomiting led to a stricter inquiry, and he was informed by the parents, that a tumour, which, on examination, was found to be situated in the left umbilical region, had appeared within a few weeks after the birth of the child, and had progressively increased to the above-mentioned period. On the 24th, a consulting Surgeon attended, who considered it to be an abscess, and appointed a day to open it. In the mean time he ordered a mercurial plaster to be applied

to the abdomen, and a grain and a half of the submuriate of mercury to be given night and morning. By the 31st, the swelling having considerably enlarged, and seeming to consist of distinct tumours, he declined the operation, and ordered fomentations. On that evening, and during the two following days, a continual draining of blood, with a discharge of small clots, took place from the bladder. On the 2d of February, the submuriate of mercury, the mercurial plaster, and the fomentations were continued. On the 8th, a Physician was consulted, who prescribed two grains and a half of mercury with chalk twice a day. About ten days after taking these powders, the vomiting, which had been occasional through the disease, ceased; and the infant seemed to improve in health, and to be better nourished. The tumour, however, continuing to increase, pointed in several places, and proved fatal on the 7th of March, the child's strength having rapidly sunk during the few preceding days. The following particulars were observed at the examination of the body, on the day after death.

Abdomen. The intestines appeared in the epigastric region, except portions of the colon and rectum, which were pressed forward to the anterior parietes of the abdomen by a very large tumour, which originated behind the peritoneum, and enveloped the left kidney. The tumour was encysted, and its pulpy contents were compared to putrid brain. At the surface of the liver appeared swellings, which, both to the touch and eye, seemed to be in a state of complete suppuration; but this appearance was

deceptive, for, an incision being made through this organ, its substance was manifestly pervaded by secondary tumours of the same structure as the large or primary tumour. Numerous cysts, varying much in size, and most intimately connected with the liver, were filled with a fungus, which broke down under very slight pressure. This substance was of a reddish-brown colour, but under maceration it soon became white, and, by expanding itself, more perfectly manifested its fungous character. When macerated for a few days, on being slightly agitated in water, its filaments were readily separated from their cysts, the internal surfaces of which were left uneven, with small membranous laminae. The rest of the abdominal viscera were not diseased. Portions of the mucous coat, and, for a small space near the cardia, all the tunics of the stomach were destroyed by the gastric juice.

Thorax. The lungs were covered with numerous prominent Tubera, of a smaller size than those in the liver, containing the same morbid structure; but maceration proved that it adhered more intimately to the substance of the lungs, than it did to the liver. The heart was sound.

Cranium. Between the dura and pia mater above an ounce of serous fluid was found. The brain had a natural appearance, and the fluid contained in its ventricles was inconsiderable in quantity.

The external character of the Tubera in the liver is well represented by Fig. 1. Plate III.

CASE VIII.

The first observation of this case was made in the last week of April, 1809, on a boy of two years and seven months old, who had an enlarged testicle. On the epididymis there was an excessively large tumour, which extended along the spermatic cord into the abdomen, where another tumour could be felt. He had lost his appetite and flesh. It was stated, that about a year and nine months previous to that period, the disease commenced at the bottom of the testicle, in a small tumour, which gradually grew. Until lately he had remained free from pain, and was able to walk. A soap plaster was applied to the tumour, and the submuriate of mercury was given internally. On the 2d of May he remained in the same state. On the 8th of June the progress of the disease was manifested by the increased size of the abdomen, and of the glands in the groin. The child was much wasted, and suffered considerable pain. He died at the end of this month.

The body was examined on the 1st of July, 1809. The tumour of the testis first affected had a medullary appearance, and was very large. A tumour connected with it, and situated just above the abdominal ring, contained a glairy fluid. The other testis had the same disease. Glandular tumours in the groin, and within the abdomen, extending to the loins, were converted into a similar white structure, streaked with blood. The liver was quite loaded with such tumours, and one of the same kind was found in the left lung.

To Mr. Astley Cooper I am exceedingly indebted, not only for the favour of being permitted to extract from his notes the record of the above-mentioned facts, but also for the very liberal loan of the finely preserved preparation of this boy's liver, the external and internal appearances of which are very faithfully represented by fig. 2. Plate III.

CASE IX.

On the 3d of June, 1808, a Physician was consulted on the case of a boy two years and six months old, who, born in apparent health, had continued well until the preceding April. A deficiency, indeed, of the natural cleft between the nates had been observed; but it was attributed to malformation. Eight weeks previous to the consultation, a tumour had been discovered at the outlet of the pelvis, near the anus. Its size rapidly increased, and from the time of its appearance externally, it disabled him from sitting, and occasioned some impediment to the discharge of his urine, and finally of his fæces.

The following external character of the disease was noted on the 3d of June. The tumour filled the outlet of the pelvis, surrounded the anus, and kept it on the stretch, by distending the skin. The scrotum was excessively loaded with serum, and the legs, especially the right, were very oedematous. The inguinal glands were enlarged. The superficial veins all over the back were much distended and varicose. The tumour was full and yielding to the touch, as if it contained a fluid. The abdomen

was tumid. The liver was much enlarged, and very irregular on its surface; but felt somewhat firmer than the tumour which projected from the outlet of the pelvis. The enlargement of the abdomen had appeared about three weeks. The Surgeons, who had attended the child, declared, that, at first, there was no disease of the liver which could be detected by external examination. At this stage of the disease both the respiration and pulse were quickened, but not in a remarkable degree.

On the first appearance of the tumour, a poultice was applied to it, and a grain of calomel was given every night; but no means were subsequently used. The boy died on the 5th of June, and his body was examined on the following day.

Abdomen. The liver occupied the greater part of this cavity. Its surfaces were covered with Tubera, which were externally of a yellowish white colour. It seemed as if only its peritoneal coat prevented the escape of pus from them; but on being opened, each contained a pulpy substance. The penicilli were enlarged, uniform in their appearance, and sufficiently distinct from the incipient Tubera. The gall-bladder contained the usual quantity of bile, of a very green colour. The primary tumour was distinct, and filled the cavity of the pelvis. It adhered to the bladder and rectum, and compressed those organs. It contained a similar morbid structure to that which composed the tumours of the liver; and, in addition to it, numerous cysts, filled with a viscid fluid. The lymphatic glands, in the direct line of absorption, were affected with the same disease; but the

alimentary canal, the mesenteric glands, the thoracic duct, the pancreas, spleen, and kidneys were free from it.

Thorax. In the lungs, the disease had commenced in small Tubera, scattered through the substance, or elevated from the surfaces of the pleuræ, containing a brown pulp, with a white spot in the centre. The heart and its membranes did not partake of the disease. The head was not examined. It appeared, from a more deliberate examination of portions of the morbid parts, which were removed for that purpose, that the original tumour, at the outlet of the pelvis, was composed of a great number of cysts, some of them considerable in size, containing either a pale glaire, or a thick tenacious fluid, of a very black colour. The cysts were lined with a white polished membrane, on which red vessels were seen; and from their *external* surfaces a luxuriant fungus had grown, filling up the spaces between them. The lymphatic glands in the pelvis and groin were changed into a brown pulp, having the fungous structure without the cysts which existed in the original tumour. In the liver, the Tubera varied much in size; some being smaller than peas, others larger than eggs. Through a considerable extent of the right lobe they had accumulated in such numbers, that the character of liver was lost. They were most distinct on the left lobe. Each Tuber projected with a regular swell from the surface of the organ, and consisted of a fungous structure, which grew from the *internal* surface of a cyst or cell, the reticular texture of the fungus being filled with a morbid secretion, which in colour and consistence resembled a

purulent fluid, tinged with blood. The cyst was intimately connected with the substance of the liver, and its internal surface was very irregular. Its pulpy contents were either entirely white, or more commonly white with an intermixture of red; and when a section of the larger Tubera was made, a great number of dots, of the colour of venous blood, appeared. Tubera are of various colours—white, black, purple, green, red; and some of these are mingled in the same subject. Although their red colour is not always produced by blood, yet, in the present example, the dotted appearance may be attributed to that source; for, in the first place, on exposure to the atmosphere, the black dots changed to a bright arterial red: 2dly, the dots had a regular appearance, like what is observed on making the section of a brain that is full of blood; but the vessels were too diaphanous and slender to admit of being traced for the purpose of demonstrating their canals: 3dly, under maceration, the fungous substance expanded from its cyst, and became perfectly white; in which state it resembled the vessels of the chorion in the early periods of utero-gestation: and, lastly, in the primary tumour, continuous red vessels were traced on the cysts from which the fungus had grown.

II. 4. CHARACTER. Tumours elevated at the surfaces of the liver, and inclining to a round figure; pulpy in their consistence, being charged with a thick and opaque fluid; variegated in their colour, chiefly white mingled with red, the former prevailing

in their incipient, the latter in their advanced stages; composed of a *very vascular* and reticular texture, attached either to distinct pouches, or to the substance of the liver; and *so unlimited and rapid in its growth, as to burst or destroy the peritoneal tunic of this organ, and to protrude in the form of a bleeding fungus.**

The symptoms do not enable us to distinguish this variety from II. 3. in the liver, during the life of the patient.

CASE X.

W. D. æt. 41, by occupation a mechanist in a brewhouse, a man of large stature, vigorous and athletic, given to the intemperate use of malt and spirituous liquors, came under the care of a Surgeon, for the cure of an ulcerated leg, in the spring of 1812. This gentleman did not, at that time, remark any derangement of his general health; but was informed that his stomach had been disordered, about two years previous to that period, to an extent which had induced him to consult a Physician for the complaint. On the 5th of November, 1812, he again consulted his Surgeon. His general appearance then indicated visceral disease. His pain was chiefly seated in the left hip and left iliac region. It was sufficient to interrupt his sleep, and was even attended with some degree of lameness when he was exposed to cold. He still, however, continued his employ-

* A name sufficiently expressive of this fact—Fungus Hæmatodes—has been applied by Mr. Hey to a similar variety of the disease, occurring in the female breast; but it has since been indiscriminately extended by others to almost every variety of Tubera, notwithstanding the absence even of the very fact which authorized the name.

ment in the brewhouse. Three grains of the submuriate of mercury, with twelve grains of the compound powder of ipecacuanha, and five grains of rhubarb, were prescribed for him at night. On the 7th, the pain of his hip had abated; but he complained of nausea and pain of the stomach. The submuriate of mercury was given in combination with the compound extract of colocynth, and was assisted in its operation by doses of the sulphate of magnesia. On the 10th, he complained of uneasy feelings in the epigastric region, and his Surgeon, by a careful examination, ascertained that the liver was not only enlarged, but presented a tuberos surface. The former medicines were changed for the mercurial pill and the extract of conium. On the 13th, a blister was applied over the epigastrium; but as the prevailing pain still extended from the left hypochondriac region to the left hip, he was cupped on that side. On the 21st, the extract of conium was continued; he also took a grain and a half of opium and six grains of the antimonial powder at night, with much relief. Opium always had this effect until the disease passed into its last stage. From the 22d of November he was committed to the care of a Physician, who, on his first visits, made the following observations. He was extremely feeble, his appetite was bad, and he had considerable uneasiness at his stomach, even after a very moderate repast. He complained of great pain in the abdomen, above the umbilicus, but most particularly in the epigastrium and in the region of the liver. These parts, when examined, were tense and painful. As the disease advanced, the enlargement of

the liver, affecting both lobes, became very perceptible through the parietes of the abdomen, extending nearly to the umbilicus; and considerable inequalities could be distinctly traced upon its surface. As the body became more emaciated, this inequality of the surface, as well as the enlargement which accompanied it, became still more distinct. Pressure produced more pain when made on some parts of the organ than on others. His countenance was remarkably sallow; but there was no appearance of jaundice, and the albuginea of the eye was of a pearly white. His urine was turbid, and deposited a copious sediment on cooling. Although his stools were variable in colour and consistence, yet they did not afford those appearances which are indicative of a very deficient biliary secretion. His pulse was, at this time, about 80; but towards the close of his life it varied in frequency from 100 to 112. He was treated by a grain of calomel and a grain of opium every night, and occasionally by aperients. His sufferings, however, were too severe to be much alleviated by medicine; and finally, even opium, in moderately large doses, procured him but little sleep. The dyspnoea was inconsiderable, and in every stage of the disease he was free from cough. About a week before his death, his food began to be rejected by vomiting, and he was frequently troubled with singultus. At this time an effusion into the abdomen was very perceptible, his strength rapidly declined, and he died on the 27th of December, 1812. His body was examined on the 30th of the same month.

External appearances. The abdomen, owing to the fluid

effused into the peritoneum, was uniformly swollen; but when the epigastric region was pressed, the enlarged liver was distinctly felt, and two Tubera could be traced on its surface. The rest of the body was emaciated.

Abdomen. On dividing the parietes, many quarts of serum, deeply coloured with red particles, escaped, and numerous filaments of crassamentum were found adhering to the intestines. A considerable portion of the liver appeared below the hypochondria, and occupied the whole of the epigastric and a part of the umbilical regions. Numerous Tubera were seen on the convex and concave surfaces of both lobes. They had a motley appearance, and rose with a gradual swell from the liver. Their contents were pulpy, of a whitish colour mingled with red, and, when compressed, a cream-like fluid, tinged with blood, rose in abundance from their reticular texture. In two distinct parts of the right lobe, its peritoneal tunic had been ruptured by soft fungi, of a red colour, from which the sanies had issued. Some of the Tubera were distinct, the fungous structure being attached to cells, and the intervening portions retaining the character of liver; but many of the tumours coalesced, and the boundaries between the natural and morbid structures were indistinct. The gall-bladder contained a very little bile of a bad quality. The parts about Glisson's capsule were so united into one mass, as to prevent any dissection of the biliary ducts and vessels. The stomach being thrust much out of its natural position by the enlarged liver, and by the clusters of Tubera which occupied its lesser

curvature, and surrounded its pyloric extremity, appeared unusually low on the left side. Its Tubera were still more pulpy than those of the liver; and their fungous structure, of a very red colour, was either contained in a large cyst, or grew from numerous small, and very distinct pouches. The mucous coat of this organ was much thickened, and its surface was irregular. Here and there a small cyst appeared in it, filled with the fungous structure. This coat was so much thickened as to narrow the pylorus, and so pulpy on its surface at that extremity, as to present an appearance resembling ulceration. Numerous lymphatic glands in the course of the aorta were converted into Tubera. The rest of the abdominal, and all the thoracic viscera were sound.

The relation between the two last varieties is so intimate, that they pass into each other. The medullary appearance common in both, can neither be said to be invariably present in either, nor even to be peculiar to them. The application of the term medullary is not, and cannot be, used strictly in its anatomical sense. It is a licence in description which medical men take, from the difficulty of conveying their thoughts on morbid appearances, just as we say of these very structures, that their reticular texture is filled with a cream-like or a puriform fluid; not meaning thereby that the fluid is either cream or pus, but that in colour and consistence it often resembles the one or the other of those fluids. Unless the meaning of the word be received in this loose sense, such an indulgence would lead to endless error.

It might even confuse the genera of disease, and retard the progress of nosology. Thus if this sort of analogy be carried a little further, and we say that the tumours contain a sort of scrofulous pus, we are in danger of confounding Tubera with Scrofula. On such imperfect evidence as this, some medical men, of no mean acquirements, actually assign to the former the name and nature of the latter. When the word medullary is applied to an appearance in Tubera, if any thing more be understood than a certain degree of resemblance, in colour and consistence, to brain, the reader is misled; for in structure these morbid textures have nothing in common with medulla.

Of all the varieties of Tubera, II. 3. 4. afford us the best opportunities of ascertaining the manner of growth, and the kind of structure which belong to this genus. But however desirous the author may be of imparting accurate information on a subject so curious and interesting, yet he must ingenuously confess his insufficiency to do it, through the want of an accumulation of facts bearing on these points, without which any opinion he could offer would be of little value. All that he can at present venture to do, is, from the observations which he has had the opportunity of making, to suggest the most probable means of attaining those ends.

If the notion be correct, that tumours are swellings which differ in their structure from the textures in which they are seated, and increase in bulk by an inherent growth, it will not be surprising to find, that the different genera of this order vary

in their degrees of independent existence. As there is a form of tumour, in which the new production owes its circulation to an extension of vessels from the part to which it is appended; so there is another, in which it owes merely its nourishment to the vessels of the original part, which do not extend beyond the cyst that contains a structure, as remarkable for its simplicity as for its unlimited power of multiplying its kind:—such is the hydatid, a species of tumour introduced on this occasion merely for the purpose of illustration; but which, in its proper place, will merit a fuller consideration. The process of generation affords a familiar and beautiful example of a separate growth, taking root, as it were, by implanting its proper vessels on cells prepared to afford them nourishment; but between which no continuity of vessel can be traced.

In Case VIII., the liver was injected; but, although the vessels of the cysts were filled, the fungus attached to the cysts was not coloured with the injection. The experiment of injecting the organs in which Tubera are found, must be fully and fairly tried, before a probable opinion of the connexion between the morbid and natural structures can be formed. And although many trials should only serve to confirm the above experiment, yet the excessive hemorrhages which issue from the fungus in the variety II. 4., ought to prevent observers from too hastily admitting that the line of separation between them is, in any of the varieties, so distinct as the appearances after injection might lead them to conclude. The author leaves this part of the investigation for those, who, to zeal and opportunity, can add the leisure

indispensable for such pursuits. He has not, however, been inattentive to these structures. As far as he has pursued the inquiry, he has found maceration to be the best means of unfolding and developing their textures. In the first, and also in some varieties of the second species of *Tubera*, the fungus consists merely of a cellular texture, which intimately adheres to the proper structure of the liver; but in other varieties of the latter, there is a direct separation, by cyst or cell, between the fungus and the liver. Thus in II. 3., Case VII., after macerating for a few days a section of the liver, a slight agitation in water readily separated the filaments of the fungous growth from the cysts to which they were attached, in a more distinct and uniform manner than a mere breach of texture could have produced; whilst the firmer parts of the fungus, which remained after maceration, resembled an imperfectly organized substance. In Case IX., maceration, for a shorter period, served to expand the fungus from its cyst, and to give to it an appearance, which might not be inaptly compared to the delicate vascular texture which appears on the involucre proper to the foetus, in the earlier stages of the human ovum.

These varieties shew that *Tubera* increase by contiguity, and are diffused through various textures either by absorption, or by a certain condition of the constitution, which is not yet ascertained. Their appearance must be referred to the latter state, when they successively present themselves entirely out of the line of absorption.

PLATE III.

Is intended to give an idea of the regular swell and pulpy character of this variety of Tubera.

FIG. I.

Represents the concave surface of the right lobe of the infant's liver, which has been described in Case VII.* The reader is requested to direct his attention to two Tubera, of rather a large size, which are seen projecting both from the convex and concave surfaces of the liver, near its thin edge, and have very much the appearance of abscesses pointing, or ready to discharge their contents.

* The author only observed the morbid appearances, and is indebted to one of his medical friends alluded to in the history of the case, not only for the opportunity of obtaining this specimen, but also for the notes of the symptoms and treatment.

FIG. II.

In this figure, a section of the right lobe exhibits an internal view, whilst the left lobe gives the external character of the Tubera, as they appeared on the surface, and in the substance of the liver, which was taken from the subject of Case VIII. The colour of the liver was produced by fine injection, which penetrated the vessels of the cysts, but not of the fungus which grew within them.

From Mr. Astley Cooper's Collection.

PLATE IV.

Illustrates the fungous character of Tubera.

FIG. I.

Represents a section of the liver of a subject, whose case has been accurately and minutely described by Mr. Langstaff, in the third volume of the Medico-Chirurgical Transactions, under the name of Fungus Hæmatodes. There are some points in the character of the tumours which establish a relation to the varieties 3 and 4; but there are others in which the difference is so considerable, that I am not sure it belongs to either of them. This specimen is here introduced merely because the colour and texture of the Tubera strikingly demonstrate the fungous nature of this genus.

From Mr. J. Hodgson's Collection.

FIG. II.

Is taken from a section of the liver which has been described in Case X., and is intended to illustrate the variety II. 4.,* commonly termed Fungus Hæmatodes. The external and internal appearances of the Tubera are represented in their different stages, and the ultimate stage is shewn by the largest Tuber, which had destroyed the peritoneal tunic of the liver, and protruded in the form of a bleeding fungus.

* The author obtained the recent specimen of this variety, and partly the notes of the case, from his medical friends alluded to in its history, who afforded him the opportunity of observing both the symptoms and the morbid appearances.

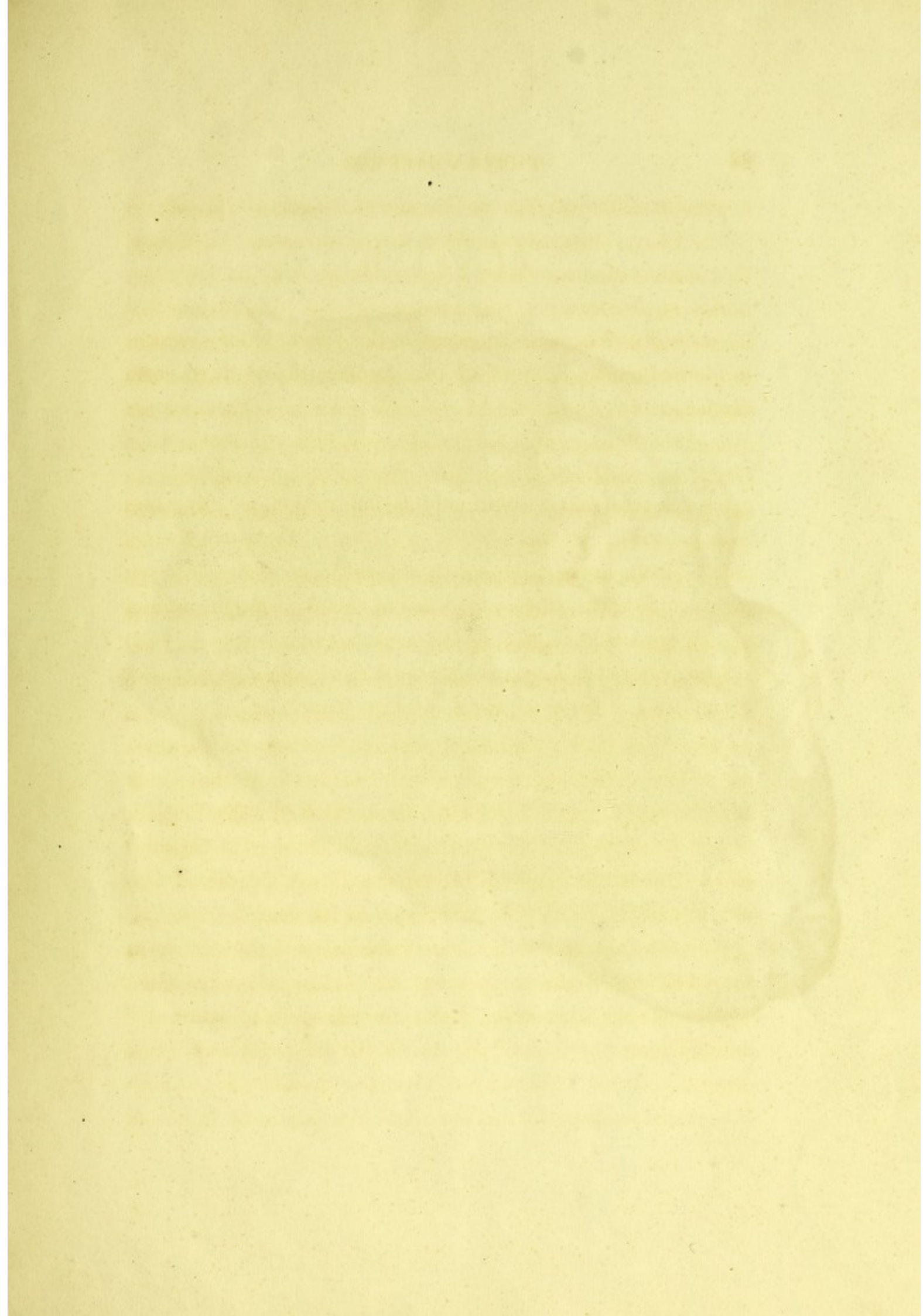


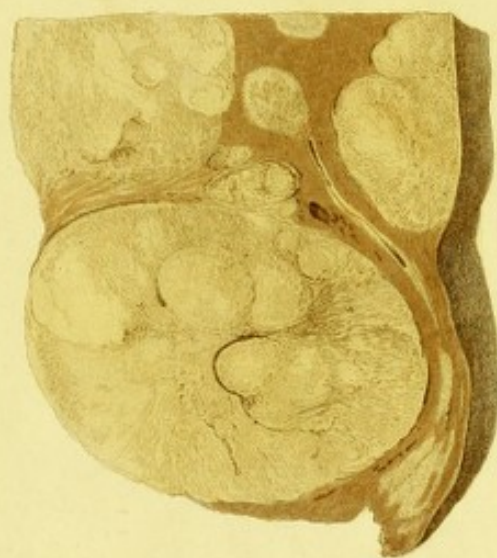


Fig. 1.

PLATE II.



Fig. 2.



H. Thomson del.

J. Stewart sculp.

Published by Longman & Co. 1871.

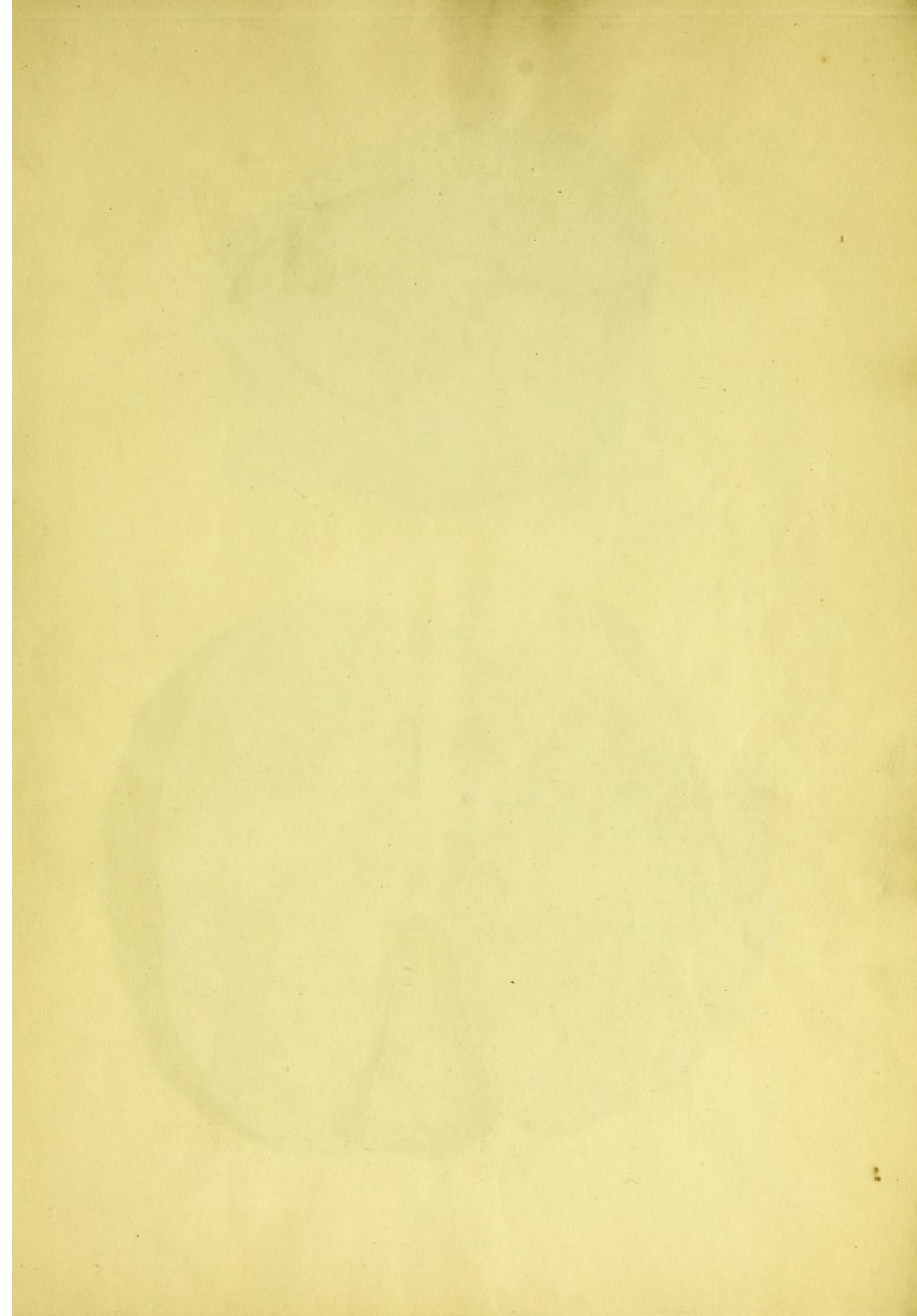


Fig. 1.

PLATE III.



Fig. 2.



H. Thomson del.

J. Sweet sculp.

Published by Longman & Co. New York.

Fig 1



Fig 2

