OBSERVATIONS
ON
JAUNDICE;
MORE PARTICULARLY ON THAT FORM OF THE DISEASE WHICH ACCOMPANIES
THE DIFFUSED INFLAMMATION OF THE
SUBSTANCE OF THE LIVER;
BY DR. BRIGHT.

The causes which generally give rise to Jaundice will, perhaps, admit of the following classification:—

1. Congestion of blood in the liver. 2. Obstruction of bile in the biliary ducts, and more particularly in the larger ducts. 3. Chronic change in the structure of the liver. 4. Inflammatory action of the liver.

1. Congestion of blood takes place in the liver under various circumstances, of which the following are the most frequent:—Obstruction to the circulation in the chest, more particularly from valvular disease, or dilatation of the heart; constipation; pregnancy; and certain conditions of the circulation, connected with remittent and other fevers.

2. Obstruction to the passage of the bile in the larger ducts takes place from biliary concretions; from malignant or other growths in the liver itself; or in glands about Glisson’s capsule; from changes in the coats of the ducts themselves; from inflammation of the duodenum; or from induration of the pancreas.

3. The chronic changes in the structure of the liver are of various kinds; sometimes the result of simple inflammatory action of a somewhat acute character, imperfectly subdued; at other times, the result of a very slow and chronic action, affecting either the secreting portion or the cellular tissue;—at others, the result of degeneration, or of malignant action taking place extensively throughout the organ.
4. The inflammatory action of the liver, which chiefly gives rise to jaundice, occurs in its substance; sometimes, if unchecked, going on to suppuration; but at other times producing a gradual change in the texture of the liver.

It is my intention, before bringing forward a few cases to illustrate the fourth class of causes to which I have referred, and which forms the chief object of the present communication, to state briefly some of the more prominent circumstances attending the other three classes; that, to a certain extent, we may have an opportunity of comparing, or of contrasting, their various symptoms, and the morbid changes by which they are marked.

When obstruction takes place to the circulation through the chest, but more particularly when the heart becomes gorged and over-distended with blood, we observe the countenance gradually assume a dingy aspect, in which the purple suffusion of carbonized blood is mingled with the yellow tint of a slight jaundice; the conjunctiva is more decidedly tinged; and if the disease continue long, the jaundice sometimes completely prevails over the purple tint: the urine becomes scanty, and high coloured, throwing down the lateritious sediments; but the dejections are not obviously deficient in bile. In this condition, the primary disease has occasionally been overlooked; and this error has been confirmed, when, on examination in the right hypochondrium, the liver has been found enlarged, descending three or four inches below the margin of the ribs, and decidedly tender and painful on pressure. In these cases, the obvious embarrassment in the chest, and the peculiar distress and anxiety of countenance, will generally present themselves in conjunction with the faint and dingy colour of the jaundice, as evidence of the original disease; and lead us to seek those stethoscopic signs, which will render still more obvious the nature of the obstructing cause.

Should death occur, it will probably have been preceded by the passage of blood, more or less freely, from the lungs or the intestines; and the examination of the body will demonstrate, that the liver has only partaken, with other organs, in the congested state of the venous system.
Dr. Bright on Jaundice.

Liver, under these circumstances, is sometimes found in a simple state of congestion throughout all portions of its tissue, to such a degree, as to give it a general dark colour, and afford an abundant flow of blood when an incision is made; but at other times, when the congestion has been of longer duration, it presents that mottled appearance which has been correctly compared to the section of a nutmeg. In the early stages, this appears to be simply a state of sanguineous congestion; but when it has continued long, some more fixed deposit seems to take place, and many of the acini assume a light-yellow colour, and a degree of firmness which is not found in the healthy organ. In connection with this condition of the liver, the mesenteric veins will be found full of blood; the villous membrane of the intestines pretty generally of a deep-red colour, but varying in different portions; the internal surface of the stomach often suffused, to such a degree, as to suggest the idea that some deleterious substance has been administered; the pancreas of a purple, or a leaden hue: and while thus the abdominal viscera are loaded with venous blood, the lungs are gorged, and blood is effused into them, in the form of apoplectic masses; and, in all probability, a certain quantity of serum, tinged with blood, and slightly coloured with bile, will be discovered in the cavities.

The treatment of this form of jaundice resolves itself into those means which are calculated to relieve the original disease: but much assistance is to be derived from the local abstraction of blood; by cupping from the pit of the stomach; or by the application of leeches to the anus, which more directly unloads the vessels of the abdominal circulation.

The second class of causes upon which jaundice depends includes those cases in which, owing to diseased structure or vitiated secretion, some positive mechanical obstruction takes place, preventing the flow of bile from the larger ducts, and thus retaining it within the substance of the liver. In cases of this kind, we usually have a very vivid colour displayed upon the skin; which takes place either suddenly, or by slower degrees, according to the precise nature of the obstructing cause; and which continues a longer or shorter
time, likewise, according to that cause; either ceasing altogether; or continuing till death takes place, at no very distant period; or passing gradually into that dingy green colour which, at first sight, impresses the eye almost like the countenance of the mulatto; and, in that sense, may not unfairly deserve the appellation of Black Jaundice. Amongst these mechanical causes, the two most frequent are, undoubtedly, biliary concretions, and malignant tubera.

The presence and even the passing of biliary calculi is by no means necessarily accompanied with jaundice; for as long as the cystic duct alone is obstructed, or the hepatic or common duct only partially blocked up, the fixed yellow colour may shew itself, although slight indications of jaundice may be present, and may recur frequently, passing away with surprising rapidity, so that almost daily changes may be observed. But, on the other hand, when the common duct is blocked up, the most brilliant jaundice often takes place; and the same in the more rare cases of the calculus being lodged in the hepatic duct. This colour will occasionally be diffused most suddenly: and when this is the case, if the obstruction be not soon removed, a fatal result will sometimes speedily follow.

The evidences of biliary concretions, as deduced from the appearance of the jaundice, are therefore by no means determinate and certain; but the pain with which the disease is generally accompanied may be considered one, at least, of the most prominent symptoms which attend the passing of calculi, and assist in throwing light on the cause of jaundice. That pain is of two kinds;—a dull aching pain, which is constant; and an acute agonizing pain, which comes and goes in paroxysms. The severity of pain is so extreme, as to bring on a state of the greatest exhaustion, and reduce the pulse below the natural standard, both as to strength and frequency; or, still more often, to render it rapid and weak, while the hands and the whole surface are bedewed with a cold perspiration. The urine becomes highly tinged with bile, and the stools of a pale drab colour; but this often varies a little in the course of the disease. Vomiting, hiccup, and a frequent catching inspiration, often accompany this form of disease; and the symptoms are aggravated or
diminished, as the paroxysms of pain advance or recede. — Another very frequent symptom is to be found in the occurrence of rigors at somewhat irregular intervals; but sometimes returning periodically, almost with the exactness of an intermittent. This form of jaundice is very apt to return from time to time, either from the successive passing of calculi which are seldom solitary, or from the ineffectual attempts made to get rid of a large calculus.

Should death occur in this form of jaundice, the cause of the biliary obstruction is generally detected without difficulty, by finding concretions in some of the various forms they assume, blocking up partially, or completely, the passages by which the bile should escape: and very frequently we have an opportunity of explaining peculiarities which have occurred in the course of the disease, by the situation occupied by the calculus. It is by no means necessary that the calculus should be large; for we occasionally find the obstruction to have been complete, though the gall-stone has been of very moderate dimensions; and occasionally the calculus has passed, leaving the duct greatly distended, but still the constitution has not been able to rally from the effects of the disease. The liver, in this form of the disease, is found considerably loaded with bile, and the bile-ducts often distended; sometimes forming pouches in which bile is collected, showing a long-continued and frequently-returning tendency to obstruction.

The treatment of jaundice, under these circumstances, is to be directed to the removal of the temporary obstruction, and consists of such means as are likely to favour the passage of the calculus. Opiates combined with purgatives, warm-bath, and assiduous fomentations, are amongst these means: but besides these, the use of mercurials and antimony are of great importance. The antimony, with a view of relaxing spasm, should be combined with the purgatives, wherever vomiting is not a very prominent and distressing symptom. The use of mercury is much more doubtful: and it ought not to be carried to any great extent; for if the obstruction be very obstinate, we run a great risk of doing mischief by over stimulating the liver; and shall probably add to the distress under which the patient labours, both by
increasing the quantity of bile secreted, when there is no means of carrying it off; and, likewise, by increasing the irritability, and diminishing the powers of the system, by the action of the remedy. In these cases, then, there is no doubt that injury is not unfrequently done by the administration of mercury: but this is still more liable to be the case in those instances of jaundice from mechanical obstruction, which arise from organic deposits.

The most frequent instances of organic deposit giving rise to jaundice are those in which malignant disease establishes itself in some of the complicated parts which lie in the neighbourhood of Glisson's capsule—the small lobes of the liver, the glandular structures, the pyloric end of the stomach, the substance of the duodenum, or the pancreas.

Where any organic lesion of this kind takes place, the jaundice is generally less sudden in its appearance than in other cases; though I have known apparent exceptions to this rule—I say apparent, because, in many cases, particularly amongst the poor, disease may have made a gradual but decided progress, without exciting attention, till the change of colour has become very observable; and then it has been supposed to have originated suddenly. It happens much more frequently, that the countenance has gradually become suffused with bile; but at length the more decided jaundice has taken place; and this has gone on increasing in intensity for a time, after which the colour has lost its brilliancy, and assumed the dark dusky green hue, and squalid appearance, which is one of the worst symptoms. In this form of jaundice the urine becomes loaded with bile, till it assumes a colour deeper than porter, but of a green tint; and the stools are of the lightest drab colour, approaching to white. Now, the patient becomes drowsy; ecchymosis takes place in various parts; blood escapes from different surfaces; the frame emaciates; and a state of exhaustion, succeeded frequently by coma, closes the scene.

Malignant disease may, however, exist in the liver to a very great extent, without producing any marked or decided jaundice; for as long as it develops itself only near the surface, or in such parts that it does not make pressure on
any large biliary duct, although slight suffusion may result, the decided jaundice will not appear: but, when the malignant growths occupy parts external to the liver, but are so situated as to press upon the hepatic or the common duct, this symptom shews itself in its greatest intensity.

There are other symptoms, more particularly those connected with the evacuations from the bowels, which accompany the complete retention of the bile—occurring in cases where pressure is made on the common and perhaps the pancreatic duct—to which attention ought to be directed; though, as yet, no certain indications can be drawn from them. I refer to the evacuation of fatty matter, more or less mingled with the fæces. In several cases where the obstruction has been in the pancreas itself, a considerable quantity of that substance has been seen floating, and completely separated from the fæces; of which another instance, besides those I have already published, has lately occurred to me in the hospital. But in most cases of very obstinate jaundice, accompanied by complete obstruction, an unusual quantity of fat has been detected; and my friend, Mr. G. O. Rees, has kindly undertaken several analyses for me, with a view of ascertaining this fact; the results of which may, at some future time, be more fully stated.

The appearances presented by the liver, where organic mechanical obstruction has long existed, are generally those of the most marked accumulation of bile in all the ducts, behind the obstructing cause, whether they be the larger or the smaller; so that, in some cases, the whole liver assumes a deep olive-green colour, or occasionally a still more vivid shade of green; the large ducts within the liver are distended to the size of the finger; the hepatic, cystic, and common ducts are of still greater dimensions; and the gall-bladder, containing several ounces of bile, projects far beyond the margin of the liver; the fundus forming a tumor, which has been perceptible to the touch, during life.

The other appearances are those which belong to the disease producing the obstruction, and to the effects of the jaundice on different organs. Amongst the former, are tubera of various characters, but generally of hard and solid consistence, or softening towards their centre; enlarged
and hardened glands; or a scirrhous state of the pancreas; and frequently a complete and permanent closing of the common ducts.

The treatment in these cases is necessarily little more than palliative. As long as the symptoms have not fully convinced us of the nature of the disease, we may be induced to employ mercurials cautiously; but where the disease is confirmed, mercury can be of little or no utility, and will generally be productive of very injurious consequences: it ought, therefore, to be avoided, except in the form of an occasional purgative; and whatever can allay irritation, support the tone of the stomach, and supply gentle nourishment to the system, will afford the best means of prolonging life, and diminishing the suffering of the patient. What power iodine, in any of its forms, may be capable of exerting over deposits of this kind, or how far it may be able to check the progress of their formation, is at present not sufficiently ascertained.

The third class of causes includes various chronic changes in the structure of the liver; and in these, many of the symptoms present a marked difference, when compared with those of the two foregoing classes. The colour of the skin seldom partakes either of the purple tinge which attends thoracic obstruction, or of the deep yellow, or the dingy green, which are so frequently observed in cases of mechanical closing or obliteration of the bile-ducts. The change from the natural colour is usually gradual and inconstant; and the yellow tinge of the conjunctiva often precedes, for some weeks, any more decided indication. In time, however, the bronzed appearance of the forehead, or the darkened areola of the eye, bespeak the approaching change; and a jaundice, bearing the lighter tints, from a sallow suffusion to a fainter or more decided lemon hue—still, however, liable to considerable fluctuation—establishes itself over the whole body.

The urine is usually scanty, and pretty deeply coloured with bile, frequently depositing the pink sediments in abundance. The alvine evacuations seldom present that marked
deficiency of bile which in some other cases is observable: on the contrary, they vary through the different shades of brown and yellow; and are often remarkable, rather for the unequal manner in which the bile is mingled, than for the absence of that secretion. The action of the bowels is generally irregular; and as the disease advances, evacuations of blood frequently take place. Ascites and anasarca usually follow quickly in the train of these diseases.

The more frequent cause which excites this form of jaundice is the excessive use of stimulating food and drink; inducing long-continued or frequently-repeated over-action of the liver, rarely amounting to an appreciable state of inflammation. It likewise arises as a sequel to more decided and even active inflammatory attacks; and is sometimes the result of the diffused scirrhus propagating itself through the organ.

The appearances presented after death vary greatly; but, as regards the liver, are all, more or less, indicative of long-continued morbid action. The liver is sometimes increased in its size; but very frequently quite the contrary, the organ having evidently undergone contraction in the progress of the disease: indeed, I have, in some cases, most distinctly traced its enlargement in the beginning of the attack, and its gradual diminution towards the more-confirmed stages of disorganization. Though the larger ducts are pervious, and a certain quantity of imperfect bile is found in the gall-bladder, yet the whole substance of the liver is frequently tinged by the bile retained within its smaller ducts. A general granular appearance exists throughout the liver, as if the acini were drawn into masses, surrounded by thickened cellular membrane: and if, without being injected, a portion of liver in this state is macerated in water for several weeks, the little granules assume the appearance of adipocere; and may be easily washed out by a stream of water, leaving a fine tissue of vessels and cellular membrane floating in the water. When the disease has gone further, the bands of cellular membrane are seen intersecting the structure, and forming more decided septa between the masses of acini. These are the more common appearances, where, from frequent over-stimulation, gradual change in the structure of the liver has given rise to jaundice. Of some of the
appearances produced by malignant deposits distributed generally through the organ I shall take another opportunity of speaking. (Vide infra, p. 638.)

Besides the changes in the liver, a great many others, affecting the organs of the abdomen and the peritoneum, might be mentioned; but that which is most frequent is the disease and ulceration of the lining membrane of the colon, which very generally occurs where the structure of the liver has gone into chronic degeneration; and in no case more frequently, than when the true fatty degeneration, which is seldom accompanied by jaundice, has taken place.

The treatment in this third class of jaundice is rather by the cautious adaptation of food, the avoiding of stimulus, and the long-continued employment of such medicines as restore and keep up the moderate action of the system, than by any powerful remedies. Much may be done in the early stages, if the patient will submit to regimen: but when serous effusions have taken place, and other symptoms of advanced disease have shewn themselves, little but temporary relief can be expected.

It will however, I think, be found, that one of the most common causes of jaundice is what I have assumed as a fourth cause—a state of inflammatory action more or less generally pervading the substance of the liver; and it is highly probable, that in different cases different constituent portions of its intimate structure become more affected than the rest: but this is a point which requires stricter investigation than has hitherto been bestowed upon it. I consider this inflammatory state, in many respects, different from that very chronic action of which I have lately been speaking, and which may rather be called a state of long-continued irritation, than a state of inflammation. The causes from which it arises are frequently very different, and, besides irregularities of diet, include atmospheric exposure, the effects of external violence and injuries, the irritating effects of biliary concretions and of the retained bile, and perhaps the stimulating action of mercury. The symptoms likewise differ in many respects from those of the other forms, though not separated by sharp and
abrupt lines of demarcation; and the changes produced on
the substance of the liver are decidedly different, affecting
much more generally the secreting portion than the con­
necting cellular tissue, and probably involving the branches
of the portal vein in preference to other parts.

The progress of inflammation, in these cases, varies so
greatly in its intensity and in its rapidity, as to allow of a
division being made into the more and less acute forms. It
frequently comes on very insidiously, with symptoms and
feelings of general constitutional derangement, depression
of spirits, slow pulse, oppressed breathing, wandering ab­
dominal pains, constipated bowels, and sometimes sickness
of the stomach. In a day or two, the conjunctiva becomes
tinged; and in a few days more, there is universal bright
bilious suffusion of the skin. It is now found that the pulse
is either accelerated, or sometimes still oppressed; and fre­
quently, on pretty severe pressure about the region of the
liver, some degree of tenderness is manifested; while in
other cases, pressure produces little or no immediate suffer­
ing, but the pain comes on gradually a short time after
the pressure has been made, and continues for hours or
days. Cases of the less acute kind generally yield readily
to treatment, if it be adopted early; and they form a large
proportion of the cases of simple jaundice which present
themselves in practice. In other cases, the inflammatory
action is attended with much more severe symptoms, with
considerable pyrexia, quick pulse, flushed countenance, and
dry tongue, while a jaundice of the most intense colour is
diffused over the whole surface. The stools are, both in the
more and less acute cases, of a light colour; but less de­
cidedly so, and subject to greater variations than when the
obstruction is mechanical; and occasionally, after a few
days, give little evidence of deficiency of bile. The urine is
deeply tinged. When the disease assumes its more active
and febrile form, those symptoms referrible to the brain and
nervous system, and which appear to depend upon the dele­
terious effects of bile circulating in the blood, are more
intensely marked than in any other form of jaundice; and
the tendency to hæmorrhage sometimes comes on very early,
and is excessive. In some cases, rigors, which assume the
form of irregular intermittent paroxysms, form a prominent feature, as the disease advances; and then it often happens, though not always, that suppuration is established; and this may be going on to a great extent, while still the jaundice has rather decreased, or varied exceedingly in its intensity.

In cases of jaundice from inflammatory action, the condition of the liver after death differs according to the period at which the disease has proved fatal: but, in general, the size of the organ is not materially increased; though, on the contrary, it is not unfrequently perceptibly diminished. There is no accumulation of bile in the minute ducts: and the yellow tinge which pervades certain portions of the structure is scarcely more than other structures of the body have obtained from the bilious impregnation with which the blood is loaded, and bears no analogy to the dark-green of the liver, loaded with bile from obstruction in the large ducts. On examining the gall-bladder, it is found to contain little bile; and sometimes scarcely a trace of that fluid is to be discovered colouring the mucus accumulated by the secretion of its lining membrane.

When the disease has terminated early in its course, the whole liver feels rather soft and flaccid; the surface appears variegated, of a light-yellow, and dark-red or purple, in patches; and certain portions project above the rest, which, when cut through, sometimes prove of a softer texture, and even to be undergoing a process of change or disorganization; and portions of the same kind are intermixed throughout the whole substance of the liver; while, at other times, the yellow portions are harder than the surrounding substance. (Plate I.)

If the disease has not proved fatal at the early period, and while the jaundice is in its brilliant and intense form, but has gone on for some weeks, till the skin has assumed the light lemon-colour tint which often bespeaks a very general disorganization of the liver, we find the structure extensively altered, and a great many of the acini apparently altogether incapable of receiving such a quantity of blood as is necessary for the secretion of bile, or for giving the healthy colour to the organ. They are then of a whitish-
yellow colour, and rather hard and contracted, than enlarged; and these altered acini are seen in groups and clusters (Plate II.), which, on careful examination, will generally be found to follow the course of the divisions of the portal vessels, so as to be disposed around them like a sheath, which sometimes extends to the thickness of a quarter of an inch.

There is still another condition of the liver, apparently resulting from this diffused inflammation of its substance, and which occurs when the stage of suppuration has become gradually developed: we then find the liver pervaded by a multiplicity of abscesses, all of which seem tending to discharge themselves into branches of the portal vein, which then assumes a most unhealthy suppurative appearance along large portions of its course.

With regard to treatment, in cases where jaundice depends upon inflammatory action, it must always be decidedly antiphlogistic; but it is only where it presents itself under the more violent forms, that general bleeding need be employed. In other cases, cupping from the margin of the ribs, and (as soon as the bleeding is stopped) the assiduous application of poultices over the liver, will be most important remedies. The combination of calomel, antimony, and opium, must be occasionally administered; and antimonials must be combined with the purgatives, which, in the form of pills, should be given to act regularly on the bowels, and should be aided occasionally by the sulphate of magnesia and other saline purgatives: and, in many cases, the saline purgatives, alternated occasionally with mercurials, are sufficient to cure the disease. A free and uninterrupted action from the skin is most desirable; and to promote this more effectually, the warm-bath may be very advantageously employed; and the poultice, while it restrains the patient in bed, assists forcibly, as a diaphoretic measure.

Under treatment of this kind, a very large proportion of cases are completely cured: and where the result is otherwise, it generally arises from some complication of diseases; most frequently from previous disorganization of the liver, or from neglect, on the part of the patient, in not applying for medical
aid, or in not steadily pursuing the plan laid down: for it is not uncommon to find persons inclined to make light of an attack of jaundice, if the pain or inconvenience attending it is not such as to prevent them altogether from pursuing their usual occupations. Nothing, however, can be more injudicious; and it is the duty of the practitioner to impress this upon his patient: for it can never be a matter of slight importance, that either obstruction or inflammatory action should exist in the intimate structure of a secreting organ, still less in an organ so delicately complex as the liver; and there is no reason to doubt, that although, even without treatment, an attack of this kind may pass off, the liver will be some time before it has completely recovered; and thus a tendency to relapse, or to a renewal of the complaint, may occasionally be observed, shewing itself at longer or shorter intervals throughout life, and terminating, at length, in the destruction of all the powers of the stomach, the ulceration of the colon, miserable emaciation, or universal dropsy.

It is not my intention to burden the present communication with the detail of the milder cases: but I will give a slight sketch of one or two instances of the more usual forms of this disease.

Case 1.—Jaundice, following Intemperance and Exposure.

William Barthram, aged 18, was admitted into the Clinical Ward, Nov. 30, 1831, labouring under jaundice of a clear bright tinge, not very deep. He had been in the habit of driving hackney-coaches for the last five years, and had drunk freely of porter and spirits; had suffered from gonorrhoea three times within the last two years; and was not quite cured at the time of his admission. Six weeks before, he had taken mercury till his mouth was sore. Seven days before, he felt himself very heavy and dull; and on looking into a glass, found his eyes of a deep yellow colour, since which his whole skin had become jaundiced. The chest and abdomen were particularly coloured, the latter of which was tense and hard; and he complained of some pain in the right side, which he said had been coming on for the last three months. Tongue slightly coated with a white fur:
bowels not open since the preceding day: pulse 82, full, but sluggish in its beat: appetite moderate.

Habeat Pilul. Colocynth. c Cal. gr. xij. statim; et Haustus Sennae vespere, si opus fuerit.
Mistura effervescens.

Dec. 1. Jaundice more general and deep. Two copious stools, solid, and of a dark clay colour: urine of a deep colour, like the infusion of senna: pulse 81, full and jerking: tongue cleaner.

Habeat Hydrarg. Submur. gr. i. sextis horis.

The calomel was repeated in these doses for ten days; after which blue pill was given, at longer intervals; and during the whole time infusion of senna and magnesia, and sulphate of magnesia, were repeated till the bowels were freely opened. After the lapse of one month, he was discharged, quite well.

CASE 2.—Jaundice from Exposure.

WILLIAM LINDO, aged 21, was admitted into the Clinical Ward Jan. 18, 1832, labouring under jaundice; a short stout young man, who had been for the last month without employment; during which time he had experienced pain at the pit of the stomach, coming on at intervals with considerable severity: bowels much constipated. He had been in the habit of drinking freely both porter and spirits, till the last month. Three days ago he observed his face more yellow than natural; and this had increased ever since. At the time of his admission, his whole body was of a decided clear bright yellow colour. Tongue moist, and nearly clean: pulse 72, somewhat jerking: skin moderately warm; lower lip and gums tender, and a little ulcerated: bowels not open for three days: pain in the head at intervals, coming on most severely at night. He complained of a sense of weight at the pit of the stomach.

C. C. scrob. cord. ad 3 xij.
Hyd. Submur. gr. v. bis die.
M. M. c M. S. ter die.


20. Three copious massive dejections, of a light-yellow colour, and
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very deficient in bile. Tongue moist and clean: pulse 60, full and sluggish: skin as before.

Haust. Sennæ statim; et pergat.

21. Four copious light yellow-coloured motions, with a little bile: urine scanty, of deep blood-red colour, and depositing a light red sediment, and tinging white paper yellow. Tongue moist, and quite clean: pulse 60, full and sluggish.

Pergat.

22. One stool, loose, and more bilious: abdomen rather tympanic.

Pergat.

23. Three or four stools, more bilious: urine less tinged: pulse 48, sluggish: abdomen still tympanic: appetite good.

Pergat.

24. Three stools, almost healthy: urine very turbid, but less tinged: pulse 60: tongue clean.

25. Continues improving.

Hyd. Submur. gr. v. quotidie.—Pergat.


Decoct. Aloës comp. 3 fs. semel vel bis quotidie.

27. One copious stool. Pulse 83, rather full, but readily compressed.

28. Gradually improving.

Ext. Tarax. 3i. ter die.


29. Yellow tinge on skin returning. Bowels not open.

Haust. Sennæ.—Pergat.


Pil. Hyd. gr. v. bis die.—Pergat.

Feb. 1. No stool.

Haust. Sennæ.—Pergat.

He went on gradually improving.

21. Went out, well.

It would be an easy matter to multiply such cases to an almost unlimited extent: but I shall rather proceed to the detail of those which, having terminated fatally, have afforded the means of forming a conclusion as to the cause of the complaint.
CASE 3.—Jaundice from Contusion of the Liver, followed by extensive Disorganization of its Structure.

CHARLES YOUNG, aged 24, was admitted into Guy's Hospital, January 14, 1829, affected with jaundice of a decidedly bright colour, though not of the most brilliant hue. His tongue was furred and brown, and inclined to become dry: urine of a deep yellow tint: stools rather loose, and of a light-clay colour: pulse quicker than natural. The account he gave was, that about three months before, while lifting a piece of timber, it slipt, and his elbow was driven in against his right hypochondrium with much force, and kept in that position for some time, till assistance came. He was a good deal hurt at the time; and the pain increased so much, that he was obliged to get medical aid; when a blister was applied, and, after some other simple remedies, he appeared to be nearly well: but about six weeks ago he began to feel weariness, and other general symptoms of indisposition, attended by pain in the side; and just three weeks before his admission, the jaundice came on rather suddenly, so that within three days it had acquired its present state of intensity.

He was confined to his bed, cupped, took mercurials, purgatives, and diaphoretics. As he was not my patient, I saw him but seldom; but, after he had been ten days in the hospital, his colour was less intense, and his stools more natural. There was no tumor to be felt in his side, nor did he complain of pain when pressure was first made; but after any examination of that kind, he experienced a dull wearing pain, which continued for an hour or two, and gradually subsided. His tongue had two brown stripes upon it, and got very dry at night.

Feb. 1. The colour is more faint; but he has evidently lost flesh. Urine still highly tinged with bile. Stools improved.

12. Colour much more faint. The abdomen tympanitic, and painful on pressure.

19. Abdomen remarkably hard and tense, with extensive fluctuation. His countenance is now of that sallow yellow colour which belongs to extensive disease in the structure of the liver. Urine very scanty.

25. The ankles are become oedematous.

March 10. The sallow colour still remains: the abdomen distended: he gets weaker. On the 15th, he died.
SECTIO CADAVERIS—March 16. Nearly four gallons of serum in the abdomen. The heart and lungs very healthy, as were also the kidneys: all the viscera of the abdomen healthy, except the spleen and liver. The spleen was large and soft. The liver shewed decided evidence of former peritoneal inflammation; the right lobe being united to the parietes by three or four firm bands of adhesion. The liver was small and contracted, with a lobulated surface. When cut into, the whole structure was altered, and converted into congeries of small globular bodies, larger than acini, and generally of a lighter colour than the healthy organ. It broke down pretty easily; and when torn through, a granulated appearance was observed. The portions of the structure which surrounded some of the larger branches of the portal vessel were evidently most diseased; so that these vessels, when cut transversely, seemed surrounded by a whiter ring: and when the vessels were laid open, the internal membranes bore a speckled white appearance, from the acini with which they were surrounded. The larger vessels contained a good deal of blood; and the spaces between the acini were purplish with blood. The gall-bladder contained about half an ounce of very light yellow bile: the ducts were pervious. In this case, there was a combination of the inflammation of the peritoneum and cellular membrane with that diffused inflammation of the secreting structure of the liver of which I am speaking: it had been left too long before regular treatment was adopted, and led to the general disorganization of the liver, and its consequences.

CASE 4.—Intense Jaundice, from Inflammatory Action, induced on a previously-diseased Liver.

Elizabeth ——, aged 28, was admitted into the Clinical Ward, Jan. 4, 1832, affected with icterus and hæmoptysis. It appeared that she had been a woman of very irregular habits of life, taking spirits freely. She had borne nine children, and her last confinement occurred fifteen months before admission. She had enjoyed good health till a month before she came into the hospital, and had suckled the child till within three weeks of that time, when she was attacked with pain in her head and limbs, constant sickness, and
occasional vomiting of dark blood. From the first, the conjunctivæ were remarked to be yellow; and in the course of a week the whole body was deeply jaundiced. The bowels were then relaxed, and the motions of a dark colour. During the last week she had experienced slight cough, with bloody expectoration; and this had increased so much, that since the day before her admission she had coughed up three pints of frothy florid blood. Her skin was of a deep yellow colour all over, with a slight tendency to petechial blotches in the arms. She seemed quite exhausted with the loss of blood, and the lassitude of the disease. Her bowels had not been open for a week, till the day before, when she passed one small light-coloured dejection. Tongue coated with a dark brown fur, but moist: urine high coloured: pulse 104, feeble, with a slight jerk. I was able just to feel the surface of the liver descending below the margin of the ribs on the right side; and by pressing firmly, and drawing my finger along, I could discover that it was rough, though without distinct or separate tubercles. Pressure, thus considerable, gave no pain.

Finding her exhausted as she then was, with the hæmorrhage continuing, and the bowels not sufficiently open, I ordered two drachms of the oleum terebinthiæ every four hours; but the hæmorrhage became so oppressive during the night, that it was necessary to apply cold freely to the chest. At the time of the visit next day, her pillow was covered with blood: she had brought up between three and four pints of blood; had also vomited once some grumous matter, evidently blood; and had passed two solid motions of a very dark colour from the admixture of blood, and very offensive. Tongue coated with a dark fur: pulse 120, feeble. She had all the appearance of a person sinking from the loss of blood, with constant most distressing jactitations; and delirious, though faint, exclamations.

It was necessary to give her some brandy; immediately after which she became composed. She was ordered to repeat it frequently, and take the infusion of roses, with an additional quantity of acid. She continued delirious, and sunk in the afternoon of the following day.

Sectio Cadaveris.—The external colour was of a brilliant
yellow, and on the arms were a few slight ecchymoses. The adipose matter was deeply stained with jaundice; as was the secretion which flowed from the lactiferous tubes, on cutting through the mammary glands. The pleura was slightly tinged with bile. The lungs were free from tubercles or unnatural deposits; but the posterior part of both, more particularly, however, of the left, was hard, and of a deep-red colour, from a large quantity of blood apparently extravasated in its substance, producing a state approaching to pulmonary apoplexy: the bronchial tubes were greatly stained with blood; and so extremely red, that it was impossible to say whether the blood might have escaped from any part. The heart was small and healthy, but contained no coagulum in its cavities: indeed the blood, in all parts, was unusually fluid.

The liver was small, and, in the collapsed state of the lungs, did not appear below the margin of the ribs: its surface was rough and variegated: the roughness, just such as I had thought I perceived during life, when I passed my finger pretty firmly over the small part of the abdomen, immediately beneath the margin of the right ribs. The elevated portions of the liver were of a tolerably bright yellow colour, and of a firmer consistence than the depressions, which were of a more purple colour, and flaccid or soft to the feel; and in many parts, particularly the left lobe, which was peculiarly thin and dwindled, portions of large vessels were seen running near the surface (Plate I). In no part were the acini distinctly seen, though best in the more solid yellow portions. A considerable quantity of fluid blood came from the liver, when it was cut. The gall-bladder was contracted and colourless, and contained about half a tea-spoonful of thick tenacious mucus tinged with green bile: the mucous lining was rather red. The ducts were all pervious, and healthy, throughout their whole extent; but were very small and contracted, and did not present the least vestige of bile.

The pancreas was healthy, and remarkably bloodless. The stomach contained some dark grumous fluid; and its vessels were distended. Its mucous membrane, particularly towards the cardiac extremity, exhibited numerous little arborescent vessels, which seemed to terminate in minute points upon the surface, suggesting the idea that they might
have thrown out blood during life. The whole of the small intestines were distended with flatus, and of a dark blackish-green colour, covered with slimy mucus internally, some of which was obviously tinged with blood; and the membrane appeared either stained, or marked with ecchymosis. The large intestines had nearly the same appearance. The kidneys were healthy in structure, but tinged through their whole texture with bile; and the pelvis of a deep yellow colour, spotted with slight ecchymosis: the bladder empty, and the uterus contracted; and the ovaries of a lengthened form, shewing marks of the escape of graffian vesicles.

In this case, it would seem as if inflammatory action had been induced upon a liver already partially disorganized by the intemperate habits of the young woman. There was no trace of obstruction in the ducts; and death resulted, apparently, from the condition of the blood, and the consequent hemorrhage, as well as the depressing influence of the bile circulating through the system.

CASE 5.—Jaundice of a most intense character, without Mechanical Obstructions; and apparently depending on Inflammatory Action in the Liver.

SARAH ——, aged 28, was admitted into Guy's Hospital, as a surgeon's patient, on the 6th of August. She was a married woman, and had borne two or three children; but had latterly been separated from her husband, and was said to be much addicted to drinking. As she had sores of a very suspicious character, she was ordered to take sarsaparilla three times a-day, with five grains of the compound ipecacuanha powder and of the Plummer's pill every night, which she continued for a considerable time. On the 13th of November I was requested to take charge of her, as she was apparently very ill; had been complaining of abdominal pain for the last week; and during the last two days had become jaundiced. I found the bowels rather confined: urine tinged with bile: pulse moderate, but quick: slight tenderness at the pit of the stomach.

Applicentur Cucurbitulæ Cruentæ regioni hepatis, et detrahatur sanguis ad 3xiv.

Foveatur abdomen.—Habeat Hydrarg. ē Cretâ gr. v. statim; et Olei Ricini 3fs. post horas quattuor; et rep. ad alvi solutionem.
14. There is still some tenderness on pressure at the pit of the stomach, and accelerated pulse.

Applicentur Hirudines quindecim scrobiculo cordis.


The yellowness increased: the stools continued of a pale clay colour: the tenderness of the upper part of the abdomen continued.

It is unnecessary to give a detail of all the daily symptoms. Cupping, mercurial purges, and blue pill, with fomentations, were continued; and during ten days no very remarkable change occurred.


25. She generally prefers the sitting posture in bed. Lips dry: tongue moist and red: some sluggishness in her mode of speech, and a plaintive tone: pulse 88: no sickness: six or seven loose dejections.

Applicentur Hirudines duodecim scrob. cord.—Cataplasm. Lini abdomini.

29. One copious lumpy white stool. Pulse 96: slight tenderness of pit of stomach: respiration tranquil: tongue moist, but more red at the edges.

Dec. 1. Her pupils are rather dilated: her mode of utterance is dull and indistinct: complains of loss of power in the left hand: the right is already disabled by disease.

2. Is lying on her right side, drowsy, with her legs drawn up, moving her left hand with a kind of jactitation, often raising it to her head; she is capable of being so far roused as to put out her tongue when pressed to do so. Tongue moist, and red at the edges: the pupils are dilated.

Applicetur Emplast. Cantharidis vertici.

Enema Catharticum.

3. Yesterday evening she was screaming loudly, with her tongue protruded beyond her teeth. To-day she is in a state of perfect coma, with the eyes turned up. She is incapable of being roused, and has taken no nourishment or medicine since yesterday.

She died the following day.

Sectio Cadaveris.—The colour of the whole body of the brightest yellow which jaundice yields. Not less than an inch of adipose matter over the whole abdomen. On removing the calvaria, the dura mater was found tinged of a brilliant yellow colour, and very vascular: raising this, the surface
of the brain shewed the vessels loaded with blood; and beneath the arachnoid, in the convolutions, lay a small quantity of serum, probably not more than natural, of a decidedly yellow colour. As the brain was sliced away, numerous points of fluid blood appeared; and from many of them, the serum which issued with the blood was of a bright camboge yellow, presenting points of that colour mingled with red points. The whole of the vessels, and the sinuses of the brain, were unusually loaded with blood: the ventricles unnaturally dry: the vessels at the base of the brain healthy. Lungs healthy; but the pleurae preternaturally dry: scarcely could one drop of serum be discovered. The heart healthy. The pulmonary and other vessels deeply tinged with bile. The peritoneum, also, was peculiarly dry. The omentum beautifully spread over the viscera. The colon, when the omentum was turned back, was seen contracted, and very yellow; while the portion of the omentum, closely attached, was spotted with ecchymosis, and loaded with fat.

The liver weighed only two pounds five ounces. It was soft or flaccid to the touch; quite free from any mark of peritoneal inflammation. Its external appearance was mottled dark-red liver-colour, with yellow stone-colour. The acini were pretty distinctly to be traced throughout—red at their centres, and yellow in their circumferences; and in most parts the yellow bore a large proportion to the whole. The gall-bladder was contracted; and contained about half a drachm of mucus, very slightly tinged with green. The ducts were all pervious and healthy, and were not even stained with bile (Plate II.) Pancreas quite healthy: spleen large: kidneys remarkably lobulated, and tinged throughout with bile, particularly the membrane lining the pelvis: ovaries, externally, very yellow: uterus also yellow, with some ecchymosis in its fundus.

In this case, there was not the slightest evidence of obstruction to the passage of the bile, nor was there any trace of it in the liver. The bile must have been rapidly absorbed into the system, almost at the moment of its formation; and its profuse mixture with the blood seems to have acted as a poison, and been the immediate cause of death. I am inclined to consider this as the result of a decidedly inflamma-
Dr. Bright's Cases of Jaundice.

It was one of the first cases which called my attention particularly to this subject: and wherever I have since met with cases which have appeared to me to approach to this, I have combined antimonials, pretty generally and freely, with the mercury and a certain quantity of opium, with much apparent advantage.

Case 6.—Intense Jaundice, without Mechanical Obstruction; and apparently depending upon Inflammatory Action in the Substance of the Liver.

Keatria Pfifrein, aged 18, was admitted into the Clinical Ward, Jan. 11, 1832, labouring under icterus. She was an assistant to a German broom-maker, and was unable to speak any English. The skin was of a brilliant yellow; and the cheeks, which were flushed, were of the colour of a very ripe apricot: she appeared exhausted; and though she answered questions pretty readily, we were cautioned, by a woman who brought her, that her replies were incorrect. Pulse 120, very small and weak: feet and body very cold.

We learnt, that when she came to London, about a fortnight ago, she had been already unwell about a fortnight; and her skin had a decidedly yellow tinge, which had daily increased, attended with an inactivity amounting almost to torpor; so that when removed from her bed, and placed by the fire, which was all she could bear of late, she sat constantly in a kind of doze. We were told that her bowels had been relaxed, without much abdominal pain; and she had not suffered from sickness. She had complained but little of headache: tongue moist, and slightly furred: the papillae prominent.

She was ordered a moderate dose of hyd. cæretâ three times a-day, and light nourishment and warmth: and should it not prove, as had been stated, that her bowels were relaxed, she was to take some colocynth pills at night.

12. She was sick yesterday evening, vomiting a good deal: she lay in a perfectly torpid state the whole night, apparently suffering no pain; but towards the morning became delirious, so that it was with difficulty she could be restrained in her bed. At the time of the visit she was very restless, and seemed to suffer pain; but was unable to answer any questions: indeed, except that she swallowed what was
given to her, she seemed scarcely conscious; and it was quite uncertain whether pressure on the abdomen gave her any pain. The pupils were dilated: the bowels had not been open, although she had taken two compound colocynth pills: pulse 106, thrilling, and compressible: tongue moist, and clean.

She was ordered two grains of calomel every two hours, and the ammonia julep every four hours; besides wine, if she became more depressed. Her head was shaved, and a blister applied over the liver: mustard-poultices to the feet: and camphor mixture was to be given freely, in case the delirium should return. Injections were to be repeated till the bowels acted freely.

During the night, the purging injections, with colocynth and castor-oil, were administered three times: she lay completely comatose the whole night: the pulse sometimes at 140, and extremely weak when not raised by stimulants. No dejection having been passed at ten o'clock in the morning, another colocynth injection was administered, which produced copious, rather dark, unhealthy, feculent motions, mixed with some sanguinolent fluid; and there was likewise an appearance like pus. The blister discharged very abundantly: the urine passed involuntarily, and in considerable quantity: mouth and lips covered with sordes: pulse 120, weak.

Applicetur Emplast. Cantharidis vertici.

She continued to sink during the day, and died at ten o'clock in the evening.

Sectio Cadaveris.—The whole external surface of a deep-yellow colour: the adipose matter was also yellow, as were the cartilages of the ribs.

The lungs were healthy; but the posterior portions gorged with blood, probably the result of her having been lying for two days on the back. The pleura of the lung of a slight yellow tinge: the heart healthy.

The whole of the abdominal viscera, when first exposed to view, were remarkably tinged with bile: the stomach of a vivid yellow: the intestines looked green: the liver was unusually small, and, for the most part, of a brightish yellow colour, with portions marked with purple or deep brown; and in parts, a finely spotted appearance was yielded by the acini. On cutting into the liver, the same yellow colour, with fine dark spots, pervaded it. The gall-bladder was very small and collapsed, and contained less than a tea-
spoonful of thick ropy mucus, of a bright green colour. The cystic duct appeared to be quite contracted; so that neither could a fine probe, nor the point of a scissor, be carried along it more than two-thirds of its length upwards; nor could the tenacious mucus of the gall-bladder be forced down it. However, there was no appearance of thickening, or of morbid deposit, either within or around the duct, which, when laid open with the scalp, presented the corrugated valvular appearance peculiar to that part of the duct. The lower part of the cystic duct, as well as the whole of the hepatic duct, and the common duct, quite into the duodenum, were pervious, and not at all thickened nor diminished from the natural calibre. There was no trace of bile in either of the ducts; and, following the hepatic ducts quite into the substance of the liver, no bile was detected; but, on squeezing the liver, the small secondary and tertiary subdivisions of the ducts were seen filled with thick tenacious mucus, of an exceedingly faint lemon-yellow colour.

The mucous membrane of the alimentary canal was perfectly healthy, but the contents were very unnatural: in some parts of the ileum and jejunum there was yellow mucus; in others, an olive-green mucous excrement; and in the colon, a drab-coloured and gray mass, characteristic of that which usually composes the faeces of jaundiced patients.

The spleen soft: pancreas healthy: kidneys tinged throughout with bile: bladder somewhat distended, rising to view above the pubis, and containing, probably, a pint of clear yellow urine.

The thoracic duct was quite empty: the arteries deeply tinged with bile.

The dura mater was of a brilliant yellow colour: the arachnoid not vascular, and quite untinged with bile: there was no unnatural effusion of serum beneath it; but the small quantity which collected in a few of the sulci was very slightly tinged with yellow, as were the few drops which collected in the base of the skull, when the brain was removed. When slices of the brain were taken horizontally, a moderate number of cut vessels were seen: many of the small points of blood gave a stain of beautifully yellow bile around them; and some points gave out the yellow serum, without any blood appearing.
The ventricles contained an unusually small quantity of serum; and that was not tinged with bile. The quantity of serum throughout the whole brain was decidedly deficient. There was no structural lesion nor irregularity in the brain.

In this case, as in the last, no obstruction could be discovered, in the ducts, which could have prevented the flow of bile from the liver; but some traces of the secretion were found in the smaller biliary ducts.

The immediate cause of death, in this case, as in the last, was the poisonous influence of the bile on the system: and in both of these cases the bile was observed, in the blood circulating through the brain more plainly than is usually the case in ordinary jaundice, shewing the degree to which it had impregnated that fluid: indeed, they present instances, as strong as I have ever met with, of the deleterious action of the bile, unattended by any of those circumstances, connected with the deficient digestion and assimilation of the food, which mark the protracted approach of death when the bile is retained by mechanical causes.

CASE 7.—Extensive Suppuration of the Liver, with Calculi in the Gall-bladder, not producing Obstruction to the Flow of the Bile.

December 22, 1835—I was requested by Mr. Clewin Griffith to see a lady who was labouring under jaundice. I found her about 61 years of age, very bulky, prostrate in her bed: her skin universally, but slightly, jaundiced: pulse 130, sharp and weak: skin hot, but the palms of the hands were moist: cheeks flushed: stools well coloured with bile: urine tolerably light in colour. Though the fatness of the abdomen rendered examination rather difficult, I could detect no enlargement of the liver, but considerable tenderness on pressure. I learnt, that the first attack of jaundice had occurred twenty years ago; and that within the last fourteen years she had suffered eight or ten attacks, almost always ascribable to indiscretions in diet or exposure. Her attacks varied in severity, but were generally removed by a few doses of blue pill and salts. In the course of the last two years they had sometimes been accompanied with
rigors, which was a new feature in the complaint. She had latterly been increasing in bulk. A fortnight before, she had eaten something indigestible, and had gone to the play: she thought, by her symptoms, that she had taken a severe cold: but she became completely jaundiced: for a day or two the stools were light-coloured; and for several days the urine was tinged with bile. For the last week she had experienced rigors, generally about once in twenty-four hours, but quite irregularly; the shivering lasting about half an hour, and sometimes going off by a gentle perspiration.

The symptoms which now presented themselves, at once led to the conclusion, that either the liver was inflamed, or that gall-stones were passing along the ducts. The imperfect and variable character of the jaundice, but more particularly the presence of bile in the alvine evacuations, and the general febrile state, inclined us to the belief, that the liver was inflamed, and possibly, should the rigors depend upon that, suppuration had taken place: on the other hand, there were many circumstances, in the long history of the disease, which favoured the idea that gall-stones had passed. As there was no doubt of the inflammatory state of disease now existing, and she was far too much depressed to venture on general depletion, we ordered twenty leeches to be applied to the region of the liver; followed by a poultice, which was to be constantly kept upon the part; while she was to take a grain of calomel, with half a grain of opium, and a quarter of a grain of tartarized antimony, every six hours.

Dec. 23. She had passed a quiet night; but her mind had wandered: pulse 110: two stools well supplied with bile. She was ordered to repeat her remedies.

25. Tongue more brown and furred: pulse 110: skin more deeply jaundiced: two stools to-day, well supplied with bile. No pain whatever, except when pressure is made over one particular point of the liver: abdomen soft: she is rather drowsy, but easily aroused.

She was now ordered a diaphoretic mixture; and was to take five grains of blue pill, and five grains of antimonial power, at night; continuing the fomentations and poultices, and light nourishment.

27. Not so well in the evening: wandering a good deal in her mind.
Jan. 1. On the whole, the symptoms have appeared, during the last three days, to improve; but yesterday she had a return, for a short time, of the rigors, and she is more jaundiced: stools loaded with bile, and, though for three days she has taken no mercury, contain much green flaky matter: urine rather scanty: pulse 118, softer: tongue less dry, and furred: she is inclined to be drowsy, but is easily roused, and answers questions very clearly: no delirium. She has taken, for the last forty-eight hours, a little antimonial wine, with nitrate of potash, in a draught, with cinnamon-water.

She lay, with little alteration, for some days; becoming, however, more drowsy and deaf; taking small doses of hydrarg. cretâ and the decoction of taraxieum, and light farinaceous nourishment, with beef-tea. On the 5th, she became gradually almost unconscious of any thing around her, but lay without pain; and when roused, denied all pain, unless pressure were made at the pit of the stomach, when she said she felt a little uneasiness.

In the evening of the 10th, a convulsive seizure occurred: from which time she seemed to have no knowledge of surrounding objects, but lay almost motionless, and the jaundice seemed to increase. I saw her last on the evening of the 12th: she lay sunk on a water-bed, moving her legs frequently; and she took, without apparent consciousness, a spoonful or two of jelly. In the night, she died.

Sección Cadaveris.—The abdomen only was examined. The whole abdomen was covered with at least two inches of adeps. The omentum, the appendices epiploice, and the kidneys, were all loaded with fat. The liver was small, but the gall-bladder of considerable size. The liver adhered by a very few old adhesions to the diaphragm, which rendered some force necessary to remove the organ; and during this, a stream of pus issued from its upper surface. On making sections, it was found that the whole liver was studded with abscesses, apparently of different ages—certainly not fewer than a hundred—from the size of a pea to that of an egg; some containing pus; others filled by a slough; and some surrounded by firm parietes, forming cysts. The vena portæ was blocked up by a very firm fibrinous coagulum closely adherent, and the vein beyond the coagulum was unhealthy and inflamed: we did not trace as carefully as would have been desirable, the ramifications of the portal vein. The gall-bladder contained no bile, but was partially distended with mucus, and a little pus: its parietes were in
a state of ulceration, and it contained ten moderate-sized angular concretions. In the appendices of the uterus we found some peculiar putty-like concretions, which were examined by Mr. Rees. (See Appendix, p. 656.)

In this case we have very general inflammation of the substance of the liver, attended with jaundice; and, though connected with the presence of gall-stones, it was far from being a common case of jaundice, from the obstruction of the bile by mechanical causes; for, from the beginning to the end of the present attack, there was no deficiency of bile in the evacuations: it passed freely down the common duct, though the cystic duct was probably obstructed. The absence of any material pain, or even of much tenderness on pressure, shews to what an extent inflammatory action may be going on in the liver without that symptom, provided the peritoneum is not acutely inflamed. It is probable, from the appearance of the liver, that, in many of the previous attacks of jaundice, inflammatory action had existed, and had even involved the peritoneum, whatever share the gall-stones may be supposed to have contributed towards that effect. The state of the vena portæ struck us forcibly: and although we neglected to trace it into its subdivisions, yet the appearance of the portion we saw, in conjunction with the case I shall immediately relate, and which occurred to me within a few days of the same time, leads me to believe that the same connection existed between the abscesses and that vessel in one case, which was so plainly observed in the other. The ulceration which had taken place extensively in the gall-bladder may have modified the symptoms in some degree; and the situation of the single spot where pain was felt on pressure makes me think that the gall-bladder was by far the most sensitive of the diseased parts. It was within a very few weeks of the occurrence of this case that I was called to see, with Dr. James Johnson, a case which he has published, and in which the gall-bladder was still more extensively ulcerated than in this; where, indeed, it was distended with pus and biliary concretions;—and, led by certain analogies which I supposed were to be traced between this case and the two which had so lately occurred, I was induced to conjecture that this might be a state
of suppurative inflammation of the liver with gall-stones. Suppuration had not however, as afterwards appeared, taken place in the liver, except as the abscess of the gall-bladder began to encroach on the neighbouring parts of the organ: of biliary concretions there were abundance.

The acute local tenderness was present; and the chief symptom decidedly different was the absence of jaundice beyond that bilious tinge which so generally accompanies derangements of the liver, even when they are slight; and this symptom had, I was informed, been more conspicuous at the commencement of the attack.

Case 8.—Extensive Suppuration of the Liver, discharging itself into the Portal Veins.—Jaundice slight: no Gall-stones.

George Turner, aged 47, was admitted into Guy’s Hospital, Jan. 6, 1836. He was by trade a tailor; and was residing in Leicestershire about two months before; when, from exposure to cold and damp, after working in a hot room, he experienced a rigor, which was followed by heat, lasting altogether only a few minutes. Before that time he had enjoyed good health; but for a short time previously had suffered from pain in the right side, which increased much from that time, and extended into the shoulders. The paroxysms returned; but continued mild for a month, and did not prevent his working. At the expiration of a month, however, they became more severe, and the pain in the side also increased. Hitherto they had observed no particular periods; but at the time of admission they generally came on at the hours of eleven in the forenoon, and four in the afternoon; and were generally preceded by a violent cough, unattended by expectoration. He likewise, frequently, had a rigor when he awoke out of his sleep. He had never been completely jaundiced; but had now a very sallow complexion, with a decided yellow tinge; and the conjunctiva tinged with bile, while the countenance was peculiarly anxious and dejected: tongue covered with a yellowish-brown fur in the centre, and a whitish fur at the edges. He complained of pain in the upper part of the abdomen, and also in the loins. The slightest pressure on the region of the liver gave him considerable pain: pulse irregularly
intermittent, and jerking: some headache. There seemed scarcely any room to doubt that the liver was, in this case, the seat of inflammatory disease.

Applicetur Cucurbitule Cruentæ lateri dextro, et detrahatur sanguis ad uncias duodecim.


7. Bowels once relieved: urine scanty and dark-coloured, not albuminous: less pain and tenderness in the region of the liver. He had a rigor last night at nine o'clock. The posterior part of the right side of the chest is very dull; and the respiration, bronchial and distant. The heart's action is indistinct and tumultuous: the conjunctiva and countenance tinged with bile.

Adde Hydr. Submuriat. gr. i. sing. pilulis.

8. A rigor occurred at half-past nine P.M. yesterday, and at half-past five A.M. to-day: bowels open twice; evacuations scanty, bilious, and containing blood: tongue thickly encrusted: pulse fuller, and intermittent: urine very scanty, and turbid: pressure on the right side causes less pain.

Habeat Enema ex Avenæ Decoct.
Sodæ Carb. gr. xv. ex Infus. Menth.; et Pergat.

9. The injection brought away a considerable quantity of blood with the stool, but gave him the greatest relief: he has hæmorrhoids. Between seven and eight P.M. yesterday, the paroxysm appeared to be coming on; but was checked by keeping him warm: one small motion, containing blood and feculent matter mixed: pulse sharp, and irregularly intermittent: the tongue is covered with a thick dry incrustation: skin hot, and dry.

Pergat; et rep. Inject.

Vespere.—Tongue thickly encrusted: pulse very quick, irregular, and compressed by the slightest touch: legs drawn up on the abdomen: skin hot and dry.

Brandy and Soda Water, and Ammonia.


Applicetur Cataplasm.; et capiat Liq. Opii sed. m xv. h. s.—
Pergat.

11. The paroxysm came on at eleven A.M.: pulse 120, sharp,
regular, and easily compressed: one small motion, without blood: tongue dry in the centre, but moist at the edges: urine less turbid: countenance less yellow: decidedly less tenderness over the region of the liver: slept a little in the night.

Hirud. viij. tumori faciei.
Ext. Hyos. gr. v. o. n.
Omitte Pil.; et pergat.

Vespere.—Pulse 165: respiration 45: the right pupil contracted; the left dilated: tongue very dry.

Brandy and Ammonia.

12. Improved: slept well in the night: bowels well opened: passed, by stool, a small quantity of blood; and has also discharged some from the mouth: had a rigor at twelve, which lasted half an hour: pulse small, and feeble. He sunk gradually; and died at twelve o'clock the following day.

Sectio Cadaveris.—The skin was universally jaundiced, of a light colour: body by no means emaciated. The lung on the right side was pushed up by the liver, which rose as high as the fourth rib; but the lung itself was perfectly healthy. The liver was decidedly large; and adhered pretty generally to the parietes, and, on its concave surface, to the different viscera on which it rested. Some parts of the substance of the liver appeared healthy; but the whole of the right lobe was pervaded by numerous abscesses; so much so, that a section through the thick part divided at least thirty, chiefly filled with yellow and tolerably healthy pus. Many of them were contained in cysts not unlike, in texture, the parietes of a suppurating tubercle in the lungs. At the thin margin of the right lobe, one of these abscesses shewed itself externally, presenting an irregular gangrenous patch, of the size of a half-crown, and, when cut into, proved a sloughing abscess: but the peculiarity of all this extensive suppuration was, that it seemed to implicate most generally the system of the portal vein; for throughout we cut into large trunks of this vessel filled with pus, and apparently in free communication with the abscesses, both large and small; so that it was very difficult to say, from the inspection of the parts, whether the mischief began in the veins, or was communicated to them. The veins themselves, however, were in a state of suppuration: they were
thickened, and their surfaces appeared imbued with suppuration, like the walls of one of the abscesses. The veins going to the cava were quite healthy, and contained blood of natural appearance. The large ducts of the liver were also healthy; and the gall-bladder contained a full ounce of light-coloured bile. The diaphragm, where it had been in contact with the liver, was beginning to be implicated in the suppuration; and the mark was visible through its whole thickness, discolouring the pleura.

The abscesses of the liver, in this case, bore the most exact resemblance to those in the last: and as there were no biliary concretions, it would appear that they are not necessary precursors of that state of suppuration, although they may be the casual exciting cause. The greater tenderness, on pressure, is accounted for by the more extensive manner in which the peritoneum of the liver was involved.

How far these two last cases may be considered allied to the slighter and to the more acute attacks of jaundice which I have related, may possibly be matter of doubt: but, upon the whole, I think there is sufficient ground for classing them as varieties of the same disease; the peculiarities of each depending, in some degree, upon the severity of the original inflammation, and partly on the age and constitution of the patient: and in this view, the eight cases, which I have now detailed, may be considered as forming a kind of series of what may be called inflammatory, or perhaps idiopathic, jaundice. The two first illustrate the mild and easily-curable form of the disease: the third is a case of well-marked inflammatory action; mild, probably, at its commencement, but rendered incurable by neglect: the three which follow illustrate the most intense form of the disease; and the two concluding cases shew the termination of inflammatory action in extensive suppuration.