

ORIGINAL COMMUNICATIONS.

OBSTRUCTION OF THE LIVER.

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OBSTRUCTION in the parenchymatous or internal texture of the liver may be temporary or permanent; temporary, when caused by recent interstitial deposit of fibrinous lymph, or simple congestion of the capillary circulation in the organ; permanent, when it is the result of any organic change of its structure.

EXCITING CAUSES. These will be found in inflammation, intermittent or remittent fever, long residence in hot climates, excessive drinking, etc.

SYMPTOMS. When obstruction has taken place in the internal organization of the liver, the following symptoms will usually mark the progress of the disease: a sense of fulness and tightness across the epigastric region, pain and tenderness of the right hypochondrium, jaundice, embarrassed respiration, intestinal or gastric hæmorrhage, anasarca swelling of the inferior extremities, dropsy of the belly, and lesion of the heart.

PATHOLOGY. The above results may be explained in the following manner. The whole of the portal circulation being formed by veins derived from the stomach, intestines, spleen, pancreas, and omenta, the blood which fills them must necessarily flow from the arteries supplying those viscera, namely, the cœliac (excepting the hepatic branch) and the superior and inferior mesenterics. When, therefore, the vena porta hepatica becomes obstructed in its capillary system, the immediate effect must be a congested condition of the vessels of the viscera just mentioned, unless relieved by gastric or intestinal hæmorrhage. If the congestion be not so relieved, and the obstruction continue, the cœliac and mesenteric arteries will be obstructed also, and gradually disallow the normal quantity of blood to pass through their channels. The abdominal aorta will then have to inject more blood through the iliac arteries into the inferior extremities than the returning vessels can carry back; and, consequently, infiltration through their capillaries into the cellular tissue must take place, and cause anasarca swelling. If the obstruction be long continued, the same thing will occur in the abdominal circulation, and peritoneal dropsy will follow: and further, if the obstruction be permanent, the heart will be at length involved. By its constant efforts to pump the blood through the congested and obstructed vessels, the left ventricle will become hypertrophied and dilated, and its valvular apparatus diseased, as evidenced either by a bellows, sawing, or rasping sound. Moreover, the mischief might not end even at this point; for, as the vascular system becomes more and more obstructed, the respiratory and cerebral organs also will be implicated, and in danger of infiltration or extravasation from their congested vessels.

DIAGNOSIS. When the obstruction is incipient, that is, before any infiltration has taken place, it may be diagnosed by a feeling of embarrassment in the breathing, a dry cough, pain and tenderness in the right hypochondrium, and a jaundiced aspect; and when it is of longer standing, in by far the majority of cases, the liver itself is more or less enlarged, which alone will suffice. Should the enlargement be concealed by dropsy of the belly, the indurated surface of the liver may often be easily detected by deep pressure of the fingers, suddenly made below the margin of the ribs. Enlarged liver cannot well be confounded in this stage with any other cause of obstruction; not with enlargement of the spleen, because here all the symptoms arise in the left hypochondrium; nor with renal disease, because, in the latter case, the microscope, the urinometer, and chemical tests, will infallibly demonstrate a morbid condition of the kidney. The disease which may more probably be mistaken for disease of the liver is a large tumour occupying the epigastric region; but, even in such a case, the presence or

absence of the acute margin of the liver will decide the question one way or the other. The following is a case of this kind, and is quoted from my *Practical Examinations*, p. 68.

CASE. J. D., aged 28, a blacksmith, placed himself under my care in the Southampton Dispensary, on account of an enormous tumour upon the epigastric region, which had been gradually increasing during eight months, and which he thought arose, in the first place, from a strain in lifting a heavy piece of timber. It appeared to be sarcomatous, and extended longitudinally from the ensiform cartilage to the navel, and transversely from the anterior margin of the ribs on one side to that of the other: indeed, it could be traced beneath the ribs on the right side. It was of a flattened shape, and, as well as I could judge, about three inches in thickness. Its texture was generally firm, except at one point on the left side, where a fluctuation could be distinctly felt, occupying a cavity about the size of a hen's egg. He had been first under the care of a gentleman in the neighbourhood where he lived, and subsequently under a physician in the county hospital, by both of whom many judicious means had been employed, but without success; and I confess, from the opinion I had formed of the character of the tumour, that I did not expect he would have received any benefit from me, fearing that the disease arose from an enlargement of the liver.

I ordered him the extract of sarsaparilla, with an alterative dose of the oxymuriate of mercury, three times a day; and local friction with tartarised antimony ointment; but, finding that the tumour did not subside under these means, I exchanged the antimonial ointment for that of the iodide of potassium, by which the tumour was eventually absorbed.

When one only of the inferior extremities is œdematous, the swelling can hardly be due to any hepatic obstruction; it must rather be sought for in some local pressure upon one of the common iliac veins before they form the vena cava abdominalis. Not long ago, I met with an interesting case of this kind, which was at first very obscure, and was attributed to hepatic causes.

CASE. Miss W., aged 37, of short stature and venous aspect, having been several times attacked with pain and constipation of the bowels, became affected with severe neuralgia of the branches of the right crural nerve, at the upper, outer, and front part of the thigh. The pain returned in paroxysms of great suffering, and was aggravated by lying in the horizontal position. The utmost attention was paid to ascertain the cause of her sufferings, and every possible remedy, both internal and external, was tried for her relief; but, in spite of all, the neuralgic pain returned with undiminished severity at irregular intervals. She became lame, could not bear the weight of the body upon the right foot, nor make the slightest effort with the rectus femoris muscle without intense agony. The limb, as high as the knee, was œdematous, assumed a dark blue aspect, and lost much of its warmth. The inguinal and iliac regions were repeatedly examined; but nothing appreciable could be detected to account for the obstruction to the circulation. At length, by a deeper manipulation, a flattened tumour was felt behind the abdominal muscles, lying upon the right iliac fossa, in the track of the external iliac vein, which at once explained the whole of the matter.

Before quitting this part of my subject, I would remark, that a bilious aspect must not *always* be expected in the advanced stage of hepatic obstruction. In some cases, the aspect is venous or pallid, without the admixture of any bilious tint whatever; and that where an immense enlargement of the liver is at once evident. I remember an instance of this kind in an elderly lady, who had for very many years an enlargement of this organ, the acute margin of which could be traced considerably below the umbilicus. Her lower extremities were often œdematous; the heart's action was interrupted; the respiration sometimes embarrassed; she was attenuated, pale, and liable to profuse hæmorrhage from the nose: in short, there could be no question as to the character of the disease; and yet she had never exhibited any appearance of jaundice to the day of

her death. Saunders, in a note to his valuable work on diseases of the liver, states that, "in many cases, as has been already observed, the liver is so far diseased, that it does not even secrete bile, and a pallid and unhealthy aspect takes place."

TREATMENT. If it be correctly stated at the commencement of this paper, that hepatic obstruction might be caused either by the recent deposit of fibrinous lymph, by congestion of the portal capillaries, or by organic lesions, the curative indications will be sufficiently plain, and, in the two first, will often be successfully fulfilled by the efficacy of medicine. If, then, the symptoms of obstruction have followed closely upon an inflamed condition of the organ, interstitial fibrinous deposit is probably the cause, and will best be treated with mercury combined with diuretics.

℞ Hydrargyri chloridi,
Scillie pulveris,
Gum. cambog., aa gr. xij.
Pulv. foliorum digitalis gr. viij.
Pilulæ scillæ comp. ʒj.
Syrupi q. s. Misce.

Divide in pilulas xxiv, quarum capiat duas ter die.

Should there be any remaining tenderness of the right hypochondrium, with darting pain and an acceleration of the pulse, local bleeding and external irritation may be added. When there is no evidence of antecedent inflammation, and the anasarca, embarrassed respiration, etc., have succeeded to an intermittent or asthenic fever, and the symptoms are associated with those of great debility, with a weak irregular pulse, and a venous and bilious aspect, congestion of the portal capillaries is to be suspected, and the case must be treated with calomel combined with tonics, diuretics, and a generous diet.

℞ Hydrargyri chloridi,
Quinæ disulphatis,
Pulv. scillæ, aa gr. xij.
Confect. rosæ q. s. Misce.

Divide in pilulas xij, è quibus sumat unam ter quotidie.

CASE. J. C., a labourer, aged 50, of a bilious and venous aspect, had been suffering from tertian ague many weeks. As the paroxysms subsided, he felt pain and tenderness of the epigastric region, which was prominent; his stomach was uneasy after meals; his breathing was extremely embarrassed; and he could not lie down. The abdomen was swollen, and his lower extremities were greatly enlarged with anasarcaous infiltration. The secretion of the urine was irregular, sometimes scanty and high coloured, and sometimes more copious. The tongue was furred; the pulse intermitting; and he was so weak and oppressed, that he could scarcely bear the journey to my house.

As it appeared to me that the symptoms of obstruction in this case were caused by a congestion of the hepatic capillaries, weakened by the preceding intermittent, I ordered disulphate of quinine with calomel and squills, as in the last prescription, three times a day. The result exceeded my most sanguine expectations. The bowels were gently acted upon; the renal function speedily restored; the anasarcaous swelling gradually subsided; and, in a few weeks, he was able to walk a distance of three miles, to report himself cured.

But, when the cause of obstruction has advanced to a morbid change in the structure of the liver, the disease becomes permanent and incurable. It matters not whether the organ be enormously hypertrophied, cirrhotised by hard drinking, or atrophied and shrunk up into a dark coloured tuberculated mass: the result will be eventually fatal. It is true, that the dropsical infiltrations may sometimes be removed, either by the renal secretion being artificially increased, by the escape of the serum through cutaneous outbreaks between the knee and ankle, or by scarifications, so as often to delude the patient with a hope of recovery; but, in a short time, the œdema, with all its distressing associations, is sure to return again and again, till the constitution is exhausted, and succumbs to the disease.

The following is a case of obstructed liver from organic lesion, showing its fatal progress.

CASE. Geo. G., aged 35, tall and well built, went to the coast of Africa, as a shipwright, in 1846, in H.M. brig *Wasp*. He had not been long in this service before he was shot through the left side of the thorax by a musket ball, in an attack upon a slaver. The ball entered between the third and fourth ribs, and was extracted from beneath the integuments at the edge of the base of the scapula. He completely recovered from the wound. After about two years' residence on this station, from the heat of the climate and excessive drinking, his liver became involved. He complained of acute pain through the right hypochondrium, which was attended with jaundice, white stools, and bilious urine. These symptoms were followed by fulness of the abdomen, anasarca of the inferior extremities, and soon afterwards by cough, shortness of breathing, and undue action of the heart. This state of things continuing more or less for a considerable time, he was invalidated home.

When I first saw him, about three months ago, his breathing was exceedingly short; he was unable to observe the horizontal posture; his inferior extremities were enormously swollen with anasarca; his abdomen was ascitic, and the skin of a venous hue. The whole of the right side of the belly, from the inferior margin of the ribs to the crest of the ilium, was prominent, dull under percussion, and exhibited an immense enlargement of the liver. The heart was hypertrophied and dilated, and imparted a distinct *bruit de râpe*, from probably a morbid condition of the mitral or aortic valves. From this time, although he was, as a forlorn hope, speedily brought under the action of mercury, he grew rapidly worse. The jaundice returned, accompanied by intestinal hæmorrhage; and he is now sinking under the fatal progress of the disease.

I have another case of enlarged liver in our infirmary, in which there is a distinct sawing sound in the mitral valves; indeed, I rarely meet with obstructed liver, occasioned by organic disease, that is not associated with disease of the heart also.

When the abdomen is much distended with serous fluid, it is seldom that absorption can be effected by the aid of medicine; and therefore, as the abdominal and thoracic functions become interrupted, it will be necessary to evacuate it by the trocar as often as the symptoms may require. If the external opening can be made fistulous, so much the better. I saw one instance of immense distention, in a man over the middle age, with bilious aspect, in which this was effected, and he recovered; but in this case there could not have been any organic lesion, or the relief would have been only temporary.

Hæmorrhage from the portal veins is another effect of obstructed liver. It may be both vomited from the stomach and discharged from the bowels. It is of course venous, comes away coagulated, and generally in immense quantities, leaving the patient exhausted and bloodless.

The treatment of this symptom requires caution. The indications clearly are to remove, if possible, the capillary obstruction in the liver, and to prevent a return of the portal congestion. These, in my own practice, have been best fulfilled by the following:—

℞ Pilulæ hydrargyri,
Extracti copalibæ, aa gr. iv. Misce.
Divide in pilulas duas omni nocte sumendas.
℞ Magnesie sulphatis ʒss.
Spiritus ætheris nitrici ʒij.
Syrupi aurantii ʒss.
Tincturæ hyoscyami ℥xx.
Infusi rosæ compos. ad ʒvi. Misce.
Capiat quartam partem bis terve die.

Sometimes the bleeding takes place from the hæmorrhoidal veins, which are also a part of the portal system. So long as it appears to be beneficial in relieving the congested condition of that system, and, in fact, the obstruction of the liver itself, without too much debilitating the constitution, it ought never to be stopped, either by me-

dicine or any surgical operation; but when the loss is a daily occurrence with every motion, and so profuse as to produce all the distressing symptoms of anæmia, extreme pallor, shortness of breathing upon the slightest exertion, palpitation, beating of the temporal arteries, indicating great debility, it becomes absolutely necessary to stop the bleeding, lest the constitution should sink from sheer exhaustion; for we must remember that this is not a mere case of occasional piles from local causes, such as a costive habit of body, the gravid uterus, etc., where there is no hepatic obstruction, but a bleeding from an extensive system of obstructed veins without valves, and therefore more apt to bleed profusely.

The remedy which will be found most efficacious in restraining such hæmorrhage, is the purified oil of turpentine, with the tincture of kino, as prescribed in the following formula:—

R Olei terebinthinæ pur. ʒss.
Tincturæ kino,
Syrupi zingiberis, aa ʒj.
Aque cinnamomi,
Aque mollis, aa ʒiij.
Misturæ acaciæ q. s. ad bene miscendum.
Fiat haustus bis terve die sumendum.

It is important that the oil should be first carefully rubbed down with the mucilage, and the other ingredients gradually added, in order that the draught may be well mixed; otherwise it may be rejected.

I will now adduce a few cases, to show the efficacy of this treatment.

CASE I. A tradesman, aged 45, the father of a large family, had been for a considerable time subject to daily hæmorrhage from the veins of the rectum. He had lost so much blood with every stool, as to become blanched and exhausted. Several medical men had been consulted, who endeavoured to restrain the bleeding by a variety of remedies, both internal and external, but without success; and the patient had prepared himself for a fatal issue. Being requested to visit him at this time, I placed him at once under the above treatment. The effect was really marvellous. The bleeding was almost immediately controlled; and, what greatly surprised me, the stools, which had been of an ash colour,—and they are always of a light colour in these cases,—assumed a healthy and well digested appearance. It is, therefore, probable that the turpentine not only acted as a styptic, but also as a deobstruent in removing, in some way or other, the hepatic obstruction. Be this as it may, the bleeding never returned; the patient gradually regained his good looks, and has for many years enjoyed excellent health.

CASE II. A lady, aged 47, unmarried, of a bilious aspect, and regular in her menstruation, had been for some time disordered in the hepatic function, and subject to severe facial neuralgia. She was, at the same time, in the habit of losing large quantities of blood by stool. After a while, the bleeding ceased spontaneously; but her general health did not satisfactorily improve. Shortly afterwards the hæmorrhage returned, and continued daily for two months; when she became so bloodless and debilitated, as to occasion great anxiety and alarm to her friends. I went to town to see her, and immediately recommended the turpentine in the above formula. In a week the bleeding was controlled, and the medicine was left off. It returned, however, as profusely as before, and the remedy was resumed three times a day for another week; after which it was again and completely successful. She has been in good health for the last two years.

CASE III. Mrs. C., aged 39, married, but without any family, came to consult me, in February 1852, for bleeding from the hæmorrhoidal vessels. She informed me that she had lost a large quantity of blood with every stool, but at no other time, for the last eight months. Her aspect was most unfavourable. She was pale as death, and was constantly drowsy. Her pulse was feeble and rapid, her tongue colourless and cold, her feet œdematous, her respiration hurried, and her strength so exhausted that she was scarcely

able to walk across the room; in short, she appeared to be in a hopeless stage of anæmia.

In this case, as in the two former, the same treatment was equally successful. At her next visit, she told me that the hæmorrhage had ceased on the third day after she had commenced the medicine, and reported herself much better. From this time her health steadily improved, without any return of the bleeding; and her strength was restored under the use of dilute sulphuric acid and decoction of bark, with gentle aperients.

Turpentine, in the above formula, has seldom failed in my own practice to ensure the purpose of a styptic in this kind of hæmorrhage. Whether it acts as a deobstruent also in removing the obstruction of the portal capillaries, I have not sufficient evidence to decide; though, from its subtle qualities entering the vascular system so rapidly, such a result is not improbable. It certainly appeared so to act in the first case. As a styptic for internal passive hæmorrhage it stands unrivalled.

The bowels are to be regulated by such aperients as will gently act upon the liver, without irritating the rectum.

R Pil. hydrargy.,
Extracti jalapæ (vel extr. rhei),
Extracti copaibæ, sing. ʒj. Misce.

Divide in pilulas xij; ̄ quibus capiat duas horâ somni pro re natâ.

Should the bleeding recur from a hæmorrhagic idiosyncrasy, an injection of cold water should be employed every morning; which will not only evacuate the bowels, but give tone to the veins of the rectum.

Southampton, July 13th, 1853.

CLINICAL ILLUSTRATIONS OF SOME DISEASES OF THE ŒSOPHAGUS.

By C. E. REEVES, B.A., M.D.

SPASMODIC STRICTURE.

THE position of the inferior constrictor of the pharynx, at the point of junction of the two portions of the gullet, renders it, like all constrictors, extremely susceptible to spasmodic contraction, whether arising from direct or from indirect irritation. Contraction of a spasmodic character is rarely met with in any other part of the canal; yet Courant* mentions an instance where it existed at both extremities at the same time, the alimentary ball being conveyed from one end of the canal to the other, and then expelled with violence or driven into the stomach. In Percival's† case it existed at the lower extremity; and in the one published by Dumas‡ at the point where the œsophagus passed through the diaphragm.

PATHOLOGY. It is rare to find any morbid change in the œsophagus, even when spasmodic stricture has existed for a considerable length of time. Portal, Monro, Howship, and others, report cases of this kind. "It will", says Abernethy,§ "be readily allowed that spasmodic stricture, when long continued, may cause a thickening in the affected part of the tube"; and Baillie|| states that thickening of the canal may be sometimes met with at the *post mortem* examination. But the reverse does occur, thickening often giving rise to spasmodic contraction.

CASE. F., aged 44, single, just at the change of life, after exposure to wet and cold, experienced some slight dryness in the throat with a sense of undefined uneasiness. She found on eating fast or swallowing a large mouthful, if not well masticated, that the food was apt to become arrested in the throat, requiring several gulps to get it to descend, yet it was not sufficient to cause any uneasiness, or require fluid

* De Nonnullis Cont. Œsoph. Quoted by Mondière. Arch. Gén. de Méd., 1833.

† Transactions of the College of Physicians, vol. ii.

‡ Consultations Médicales.

§ Surgical Works.

|| Morbid Anatomy.