

SOME RECENT MEDICAL CLINICAL EXPERIENCES ILLUSTRATING THE VALUE OF SURGICAL HELP IN CONNECTION WITH THE LIVER AND BILIARY SYSTEM.

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[Read in the Section of Medicine, November 12, 1915.]

DURING the past summer several cases of more than usual interest came under my notice in the wards of the Meath Hospital. I select three of them for report—all three connected with the liver and biliary passages.

CASE I.—*Acute Hepatitis : a Sequel to Amoebic Dysentery : Operation : Recovery.*—On July 19, 1915, Edward K., aged twenty-seven, a time-expired soldier, was admitted to hospital complaining of pain in his right side and “diarrhoea.” He had been suffering for two months.

Medical History.—The patient went to India with his regiment when he was twenty years of age, and remained there on active service for six years. In August, 1914, the regiment was ordered to France. Three months later he was severely wounded, his right tibia being fractured. From December to April he was under hospital treatment for his wound at Brighton. On leaving hospital, he spent some time convalescing at Galway.

In answer to questions, he stated that while he was in India he used to drink about a gallon of beer on the average daily. He never “went sick,” but about a year before he left India

he noticed a slight stabbing pain in his right side, just below the ribs, after a hard field-day. The pain would disappear an hour or so after he had removed his "equipment."

Some two months before his admission to hospital, this pain returned for a week, becoming very bad in the evenings. At first the pain would leave him for a time, but return again and again. Finally, it became continuous three weeks before admission to hospital. The patient described this pain as a soreness, with an extra twinge when he moved. Loss of appetite was succeeded by vomiting, milk being almost the only thing he could keep down. After vomiting, the pain usually became worse. The tendency to vomiting ceased after his admission to hospital. He could not lie on the left (the sound) side, for the attempt to do so caused extreme pain and suffering.

On admission, the patient's weight was only 7 st. $8\frac{1}{2}$ lbs., although he was of medium height (5 ft. 6 or 7 inches). His pulse-rate was 136, respirations 36, and temperature 99.4° , rising later to 101.6° . The urine was of a deep amber-colour, nearly clear, acid in reaction. Its specific gravity was 1018. It was free from albumen and sugar, but contained some bile. The patient was very thin.

Physical examination revealed a considerable enlargement of the right side of the chest in the infra-mammary region. There was lessened movement on the right side. Respiration was of the thoracic type, and the abdominal wall on the right side was fixed (vital ankylosis). Exaggerated vesicular breathing was heard all over the left lung. The area of liver dulness in front extended downwards from the nipple level to some two inches below the costal margin. Posteriorly also there was a large area of dulness on percussion. On deep inspiration the liver descended after a sluggish fashion. It could be easily felt, and gave the impression of a globular swelling, so as to suggest the presence of a single or "tropical abscess," especially in the light of the medical history.

On the evening after admission (July 20) temperature rose only to 100° , but pulse and respirations remained rapid, and there had been as many as 17 motions from the bowels in two days.

My colleague, Mr. Henry Stokes, kindly examined the patient in consultation with me, and we agreed that an immediate operation was called for. Mr. Stokes kept in mind the possibility of a suppurative appendicitis. I inclined to the diagnosis of a hepatic abscess, or of a hypophrenic abscess. A right empyema did not seem probable. I am indebted to Mr. Stokes for the following surgical report on the operation he performed on July 20. 1915 :--

“ On approaching this case I felt sure I had to deal with a collection of pus either in or outside the right lobe of the liver. An incision from the angle of the eighth rib downwards revealed a very much enlarged right lobe of the liver, boggy and soft to the touch and of a pale colour. There were no adhesions above or below the liver. The great omentum was not adherent. Feeling certain that there was an abscess in the liver I introduced a large aspirating needle in several directions to the depth of from three to five inches. Nothing but blood appeared. The diagnosis then was changed to hepatitis, although to the naked eye there were no signs of inflammation present. The abdomen was closed without a drain. There were no subsequent complications.”

The improvement in the patient's state which followed hard upon the operation was striking in the extreme. Temperature fell to and at times somewhat below normal, and both pulse and respirations came down in rate more slowly, but as surely.

At Mr. Stokes's suggestion, emetine hydrochloride was exhibited because of the medical history. On July 22nd the patient was given one-third of a grain hypodermically every fourth hour. This was continued for two days. Again, on August 8th, the same dose was given at like intervals of four hours until 2 grains had been adminis-

tered. The formula used on a third occasion—August 17th—was—

R Emetinæ Hydrochloridi, gr. 2 :
Aquæ, minima cxx. Fiat solutio.

Of this solution 20 minims were injected hypodermically every sixth hour.

CASE II.—*Biliary Colic and Chronic Cholecystitis : Cholecystotomy : Recovery.*—Mrs. Annie I., aged forty-seven, wife of a commercial traveller, was seen by me in consultation with Dr. John F. C. Meyler, on Wednesday, July 21, 1915. She had been suffering from acute pain in the abdomen, particularly on the right side, vomiting, and intense thirst from the previous Friday night, July 16. She was very stout and obese.

Her medical history went back ten years, when she had had a “bad confinement,” followed by an attack of pain in the right side of her belly. From that time up to the present date she had suffered from recurrent attacks of pain in the “pit of the stomach” after eating, or on lifting heavy weights. She was not jaundiced, nor was the urine unduly high-coloured for its specific gravity, which was 1023. Its reaction was acid, and neither albumen nor sugar was present. On palpation, the most tender spot corresponded with the region of the gall-bladder, but her fat abdominal wall interfered with palpation. There was marked vital ankylosis over the right hypochondrium and epigastrium. Her tongue was thickly coated.

With Dr. Meyler’s consent she was admitted at once to the Meath Hospital as a case of biliary colic calling for operation. From the condition of the urine and the absence of jaundice, we inferred that the seat of the biliary obstruction was not in the hepatic or common duct, but in the cystic duct.

When admitted to hospital her pulse was 100, respirations were 28, and temperature was 100.4°. She was put on a simple diet of two-milk whey and egg-water, as well as tea, and was ordered to take 20 grains of benzoate of sodium in 4 ounces of warm water thrice daily. Hot fomentations and poultices alternately were applied over the pit of the stomach.

A turpentine enema next day acted well. On the 23rd a resorcin gargle was ordered as the mouth continued very foul. On the morning of July 25 Mr. Stokes operated. The gall-bladder was found much enlarged and full of gall-stones, large and small. Its walls were thickened and it was evidently the seat of a chronic catarrh. From its cavity Mr. Stokes removed 92 gall-stones, one of the largest was firmly impacted in the opening into the cystic duct, from which it had to be cautiously scooped out. Part of it was broken off in the process of extraction. Most of the calculi are small. The largest measures one inch (2.5 cm.) in its long axis and two inches seven lines (6.5 cm.) in circumference. It weighs 67 grains. Its nodular bossed outline shows that it is composed of a number of smaller gall-stones welded into a mass by later deposits of cholesterin, mucus and epithelium.

The next in size presents a similar appearance and formation. It is of especial interest, for it was the calculus which was so tightly impacted in the entrance to the cystic duct as to effectually block it. In the attempt to dislodge and scoop it out it was fractured—a fact which reveals its internal structure. The broken face shows a number of hollows into which small calculi fitted. The numerous smaller gall-stones are sharply faceted, indicating how tightly packed together they lay in the gall-bladder.

The combined weight of the 92 calculi is 335 grains.

Mr. Stokes has kindly given me the following note of the surgical aspect of the case. He writes :—

“The patient, on account of her fatness, was to me a certain cause of anxiety. However, she took the anæsthetic, which was ether, excellently, and on making an incision through the upper part of the right rectus, about six inches long, I found that the weight of her omentum and intestines had displaced the liver upwards, bringing the distended gall-bladder into view. As the omentum was adherent to the gall-bladder and also to the parietal peritoneum, the danger of diffuse infection was greatly lessened. The gall-bladder was lifted well out of the abdomen, the purulent fluid it contained sucked out by a syringe, and the stones were removed, a large drain being left

in. The abdomen was closed by three layers of sutures. There were no subsequent complications, and the wound healed in three weeks."

An episode in the after-treatment of this patient may be mentioned. Four days after operation she complained of being unable to sleep. As she was not in pain, and finding no other likely cause of insomnia, I decided to try the effect of suggestion. So, with all due formality, I ordered that she should be given a "simple hypodermic injection" at bedtime (9 p.m.). Had this been given, it would have consisted of ten minims of Vartry water injected under the sterilised skin. Before "bedtime" came the patient fell fast asleep, and told me next morning that she had had "a splendid night."

Convalescence was rapid and uneventful, and she left hospital on August 26th a "new woman," and brimming over with gratitude—free from pain and better than she had felt for ten years.

CASE III.—*Biliary Colic.—Obliteration of the Gall-bladder : Operation : Recovery.*—On September 6, 1915, Mrs. B. G., aged forty, whose husband was employed in Guinness's Brewery, was admitted to the Meath Hospital under my care as a case of "biliary colic." She was of medium height and weighed 9 st. 8 lbs.; but she stated that of late she had lost weight. Her tongue was coated and her mouth was in a septic condition. The medical history quite confirmed the diagnosis, and bile was found to be present in the urine, which was acid in reaction, with a specific gravity of 1020, free from albumen and sugar. After one day in hospital, both pulse and temperature became markedly subnormal, which conditions I looked upon as suggestive of cholæmia.

She was placed on a strict diet of whey and egg-water owing to irritability of the stomach, her mouth was disinfected, and benzoate of sodium was given in 20-grain doses with 4 ounces of warm water three times a day.

I asked my colleague, Mr. Richard Lane-Joynt, to see the patient in consultation with a view to operation. He agreed in the diagnosis, and kindly operated on September 13th. He has been good enough to give me the following account of the operation and its sequel.

The anæsthetic was ether, administered by the House Surgeon, Dr. Amy Nash, and Mr. Joynt was assisted by his Clinical Clerk, Mr. G. W. Pope.

“ The abdomen was opened through the right upper rectus muscle two inches from the middle line. An oblique incision was carried inwards and upwards from the upper part of the wound to gain free access to the parts. The patient was fairly stout, having one and a half inches of fat and very strong abdominal muscles. No trace of the gall-bladder could be found, the groove on the under surface of the liver where it ought have been being quite free. Below this, and involving the duodenum, was a mass of omentum whose adhesions masked the relations of the parts, and the least attempt to search in this for the presumably atrophied gall-bladder gave rise to considerable hæmorrhage. What appeared to be gall-bladder in this altered condition proved on making a small incision to be duodenum filled with bile, and a finger introduced through the opening so made could be passed upwards through the pylorus and downwards into the gut. Calculi had already been located in the common ducts, but it was deemed advisable before removing these to make sure that no others existed either in the gall-bladder or in the cystic duct. As none could be found except those mentioned and as no trace of gall-bladder could be detected, and no evidence of malignant disease was present, the duodenal wound was closed with silk sutures and the extraction of the stones from the common duct proceeded with. These were two in number, having numerous facets well rounded at the edges, but packed close together in the duct, about one and a half inches from its junction with the duodenum. The duct was sewn up with catgut, and a split rubber drain was sewn to the outside of the duct with catgut and the abdominal wound closed.

“ Recovery was steady and marked by a rapid fading of the jaundice. A fistula formed about the third day from the duodenum, and for a week discharged intestinal contents, the bile contents of which were very slight. The suture holding the drain tube was absorbed on the ninth day, allowing the tube to extrude, it was gradually shortened and removed some days later altogether. The reappearance of bile in the fæces and its vanishing from the skin and urine shows that the block has been successfully overcome.”

This was a complicated case from its nature and from the fact that a duodenal fistula followed the operation.

For a fortnight after the date of operation (September 13th) there was a certain amount of constitutional disturbance, the thermometer readings ranging between 98° and 100.6° F., with a corresponding irregularity of the pulse and respiration records. By the 1st of October, however, things settled down, and the last fortnight of Mrs. G.'s stay in hospital was marked by steady improvement and a full restoration to health. She left the Meath quite convalescent on October 16th.

Three days after operation (September 16th) the urine was bile-stained, slightly turbid, acid in reaction, of low density—1014, free from albumen. On September 22nd, the urine was deeply bile-stained, strongly acid in reaction, and the specific gravity had risen to 1028. From that time onward the biliary condition of the urine steadily lessened, and the secretion became perfectly normal before the patient left hospital.

Remarks.

In the first case the interest centred largely in the diagnosis. Was the case one of acute hepatitis or one of tropical abscess? The question was settled by the operation, which certainly had a marvellously good effect

upon the patient's state. I do not grudge the emetine treatment a share in the happy result, but the lion's share, to my mind, belongs to the operation.

The gall-stone cases are, of course, not out of the common. But the number of stones in the former of the two cases reported was remarkable ; and in the latter case the pathological condition of the parts involved was noteworthy.

As to the size of the large calculi in the former case, I may recall the fact that on November 26, 1881, I exhibited to the Pathological Society of Dublin a very large gall-stone which had been passed *per anum* by an elderly woman after great physical suffering. That stone was three-quarters of an inch in length in its short axis and one inch in its long axis ; its short circumference was $2\frac{3}{4}$ inches and its long circumference was $3\frac{1}{2}$ inches.* On February 25, 1882, I was enabled, through the courtesy of Surgeon-Major Hare, A.M.D., at that time stationed at Mooltan, in the Punjâb, to communicate to the same famous Society the measurements of three large gall-stones passed *per anum* by a married lady, aged forty-one years, on November 11, 1881, November 25, 1881, and January 3, 1882. I cannot forbear to quote Major Hare's graphic description of the unfortunate patient's attacks of biliary colic :—

“ No. 1 passed through the common bile duct on the 7th of November, No. 2 on the 20th of November, and No. 3 on the 21st of January. These were the periods of terrible suffering—intense pain, as if a cord had been tied round the waist ; great restlessness, the patient constantly getting up to have the back rubbed ; windy eructations ; a choking sensation ;

* Proceedings of the Pathological Society of Dublin New Series. Vol. IX. 1882. Page 112. See also Dublin Journal of Medical Science. Vol. LXXIII. 1882. Page 151.

gasping for breath ; vomiting, and the sudden distension of the abdomen with wind ; great collapse, and coldness, the patient being pulseless, and appearing on the point of death. I have found emetics of mustard do good, and bromide of potassium relieves (when it can be retained) the flatulence.

“ These symptoms are followed by delirium, sometimes violent ; wanting to get out of bed and run away ; talking incessantly. During the last attack the patient sang correctly the *Inflammatus* from the *Stabat Mater* and Mozart’s *Agnus Dei*, from No. 1. Mass, and she has now no recollection of having done so. The patient was weaker then (21st of January) than on the former occasions, and the exhaustion nearly extinguished her life.”^a

At a meeting of the Pathological Section of the Academy of Medicine in Ireland held on Friday, January 16, 1885, I exhibited a series of seven gall-stones which had been passed *per anum* by a woman aged forty-seven or forty-eight years, very stout, of a sallow complexion, but not jaundiced, a patient of my relative, Dr. Frederick Hone Moore, then practising at Anstey, in Leicestershire.^b Dr. Moore kindly sent me these gall-stones, which I now once again exhibit to the Academy. They are figured both in the third volume of the Transactions of the Academy and also in the seventh Fasciculus of the Atlas of Illustrations of Pathology published by the New Sydenham Society.^c At my request, Mr. P. S. Abraham was good enough to make a careful examination and analysis of these seven gall-stones, which are represented of natural size in the

^a Proceedings of the Pathological Society of Dublin. New Series. Vol. IX. Page 120. See also Dublin Journal of Medical Science. Vol. LXXIV. 1882. Page 163.

^b Transactions of the Academy of Medicine in Ireland. Vol. III. 1885. Page 297 *et seq.* See also Dublin Journal of Medical Science. Vol. LXXIX. 1885. Page 248.

^c London : The New Sydenham Society. 1889. Plate XXXII. Figs. 5, 6, 7, 8, 9, 10, 11, 12.

lithographic plate of the Atlas of Pathology and in the woodcut which accompanies my communication to the Academy of Medicine.

Mr. Abraham's report ran as follows :-

" Their composition is pure cholesterin. They weigh altogether 39 grammes (1 oz. 164.3 grains). There is one (marked A.—B. in the woodcut) much larger than the others, which weighs alone nearly 17 grammes (262.3 grains, or considerably more than half an ounce). This calculus is somewhat conical in shape, the base being smooth by facetation, and 31 millimetres ($1\frac{1}{5}$ inches) in diameter. The height is 37 m.m. (nearly $1\frac{1}{2}$ inches). Except on the base, the surface is slightly rugose. At one side a large fragment (A.) has been shelled off, exposing at a deep level a flat facet, which from its rubbed appearance was probably exposed prior to the expulsion of the calculus. The other calculi present numerous facets, some of which are flat, others hollowed out."

Through the courtesy of Mr. Francis J. Baidon, M.B., C.M. Edin., of Southport, I have been favoured with a reprint from the *Liverpool Medico-Chirurgical Journal* for July, 1915,^a of a case of acute intestinal obstruction caused by a large gall-stone in a man, aged seventy-eight, whom he saw in consultation with Dr. Henderson, of Southport, early in June, 1914. The patient, a retired naval instructor, was suddenly seized with severe vomiting. Until this attack he had enjoyed excellent health, and there was no history of biliary colic or of jaundice. His temperature was normal, pulse 80, tongue rather furred. There was *no pain*, but his abdomen was rather tender and somewhat distended. No hernia existed, nor could any localising symptom be found. The vomit was light brown in colour and not feculent.

As the symptoms persisted for forty-eight hours after

^a Page 227, *et seq.*

the consultation, an exploratory laparotomy was done by Mr. Baidon, who felt a large hard lump in the small intestine. He opened the bowel by a longitudinal incision, removed the concretion, and stitched up the bowel-wound with the usual Lembert sutures. The bowel was carefully cleaned and returned to the abdomen. The abdominal wound was then closed with silkworm gut sutures.

The restlessness of the old gentleman caused some septic complications, but ultimately the wound rapidly healed by granulation, eventually leaving a surprisingly good cicatrix. The patient left the Private Hospital about four weeks after the operation, and has since enjoyed capital health.

The concretion proved to be an immense gall-stone. It weighed 418 grains. It is cylindrico-oval in shape, measuring 2 inches in length, $1\frac{1}{4}$ inch in breadth. The circumference measurements are $5\frac{1}{2}$ and 4 inches. It is composed almost entirely of cholesterine, with a small percentage of calcium salts. The specimen is now in the Museum of the Royal College of Surgeons of England.

Mr. Baidon justly observes that "it is incredible that any cystic or common duct could pass such a stone." A more feasible suggestion is that ulceration enables these large gall-stones to pass from the gall-bladder direct into the duodenum or other portion of the intestine, adhesions between the gall-bladder and the bowel taking place and preventing peritonitis. The patient averred that he never had any pain, or indeed a day's illness in his life, and yet the concretion was where Mr. Baidon found it. He thinks that it is impossible for so large a calculus to have been successfully dealt with by Nature alone. Perforating ulceration of the bowel would soon have taken place, with rapid death from peritonitis.