

hospital. He was a big powerful man, unable to sit or lie still for an instant, and evidently in great pain. He preferred to lie on his right side, with his knees drawn up, but he could not lie on his back. The abdomen was contracted, walls rigid, muscles prominent, and extremely tender on pressure; extremities cold; face pinched; temperature 96°; pulse 104, hard and wiry. He was retching a good deal, and vomited a small quantity of dirty green fluid. He said he had had much retching, but had been unable to vomit, although he had the desire. His bowels were last open on the morning of the acute attack. No difficulty in micturition. He died fifteen hours after the attack. On post-mortem examination an acute intense general peritonitis was discovered. The intestinal coils were much injected and adherent by recent lymph. The peritonitis was about equally distributed over the abdomen. On the posterior surface of the stomach, near the lesser curvature and about midway between the cardiac and pyloric orifices, was an old ulcer about the size of a sixpence. The edges were raised and thickened, and the floor, which was formed by the sub-peritoneal coat, showed a round perforation about four lines in diameter. The organs generally were healthy.

I have seen four other cases of gastric ulcer fatal through perforation. In these there was a pretty definite history of gastric ulcer, but in all of them the symptoms had been more prominent for some little time preceding the actual perforation. One was a man who for two years had suffered from attacks of pain in the chest about the middle of the sternum, with frequent vomiting. Two days before the acute attack abdominal pain came on and lasted all day, although he continued at work. Next day the pain was worse and vomiting occurred, but still he was able to work. Then came on the acute symptoms, and he came to the hospital with evident peritonitis. Another, who had had symptoms of gastric ulcer for ten years, had aggravation of symptoms for three months before the perforation occurred. It is important to bear in mind, then, that, although symptoms of gastric ulcer are generally present, sometimes they are as latent as in the duodenal cases. It is not, however, a matter of very great importance, after perforation has taken place, to be able to say whether the ulcer is in the duodenum or the stomach; but it is quite different when we have to decide between the stomach or duodenum and the appendix. If vomiting occurs, the ulcer is more likely to be in the duodenum than the stomach.

Perforation of the appendix has happened in all the cases I have seen to individuals in perfect health. Nearly all were young adults, and, as is to be expected, no history of premonitory dyspepsia was forthcoming. In St. Thomas's Hospital Reports for 1885 I published seven fatal cases of this disease, six of which I had myself seen. Since then seven more fatal cases have occurred, making a total of thirteen during the three years I was resident. In none of these had there been any previous similar attack, and careful investigation failed to discover anything of the nature of previous dyspeptic symptoms. If a patient has an attack of perityphilitis from which he recovers entirely, the adhesions left from it will, I take it, prevent anything like a perforation into the general peritoneal cavity; but if an abscess remain after the attack, then, of course, peritonitis may occur. The diagnosis I take to depend on a process of exclusion, assistance being derived from the age of the patient and the progress of the case.

The following case is instructive as a contrast to the cases of duodenal ulcer.

D. M—, a milk-boy aged eighteen, one afternoon, while washing his milk-cans, was suddenly seized with pain in the lower part of the abdomen, and was at once sick. Previously to this attack he had had perfect health. He went to bed, but, although the pain abated, the sickness and retching continued. For the next five days, however, he was able to do his work, and, although suffering some pain in the abdomen, he had no sickness. Meanwhile he had taken castor oil and a dose of medicine, which acted slightly on the bowels. On the evening of the fifth day he was again seized with such severe abdominal pain that he fell on the ground and kicked, being sick at the same time. Next day he walked to the hospital, and was found to have symptoms of acute peritonitis. Pulse 132, feeble; temperature 100.4°; voice feeble and broken; face expressive of pain; extremities cold; lips blue; decubitus dorsal, with legs drawn up; abdomen rigid and tender, and slightly fuller than normal, with motionless breathing and

dulness in the right flank; superficial abdominal veins very distinct; difficulty in micturition. His pain was relieved by morphia, but his pulse increased next day to 160, his condition went from bad to worse, and he died three days later. The post-mortem examination showed a perforation in the middle of the appendix, through which a faecal concretion had passed; this had set up a peritonitis, most intense in the caecal region. In this case there was what is, as far as my experience goes, an uncommon event—a premonitory attack of pain and vomiting, but the pain was in the lower abdomen, not the upper, and only occurred a few days before the perforation. His age also would have been an unusual one for duodenal ulcer.

(To be concluded.)

## HYDATID CYST OF THE LIVER; ABDOMINAL SECTION; RECOVERY.

BY WILLIAM H. BULL, F.R.C.S. EDIN. &c.

LOUISA M—, aged seventeen, first consulted me in March, 1887, with the following history. Her family history was good, and she herself had enjoyed the best of health up to the age of twelve, when she had an attack of typhoid fever. Twelve months after that she noticed a small swelling on the right side of the abdomen, which could be easily moved about. At times it caused a good deal of pain, and occasionally interfered with sleep. For the twelve months previous to my seeing her the appetite and strength had been failing. Her courses had been regular, but the bowels were habitually constipated.

The patient was a well-nourished, healthy-looking girl, with a somewhat anxious expression. She complained of gradually losing strength and being unable to follow any occupation. The appetite was bad; the tongue clean; pulse quiet and regular, but rather weak. The urine was normal. The menstrual periods came regularly every month. On examination, all the organs in the body were apparently healthy. She had never suffered from any affection of the liver, and had not been jaundiced. On examining the abdomen, a tumour could be felt, about the size of a large cricket ball, occupying the right hypochondriac region. It was smooth, elastic, rounded in shape, and slightly tender when examined; no fluid could be detected by manipulation. When left alone it lay partly behind the ribs on the right side. It could be made to move freely "all over the abdomen," and could be brought down into the right or left inguinal region, where it would remain for a short time and gradually recede; it could not, however, be brought down into the pelvis. On inspiration it was forced down, so that the hand could be placed below the ribs and above the tumour and its ascent stopped; and in this position there was *perfect resonance* of three or four finger's breadth (between the tumour and the liver). There was no pedicle to be felt, but the tumour seemed to move in a semicircle from side to side. Vaginal examination gave only negative results. My first impression was that the tumour was ovarian, with long pedicle; but on further examination I was strongly of opinion that it was an omental cyst.

Early in May the patient was seen by Dr. Buzzard and his colleagues at the Northampton Infirmary, all of whom favoured the idea of its being renal, but surgical interference was not advised. Towards the end of May I sent the patient to St. George's Hospital under the care of my friend, Mr. T. P. Pick. While there she was examined under ether by Dr. Champneys and Mr. Pick, and a consultation held by the staff of the hospital. The general idea was that the tumour was omental, and an exploratory operation advised. She returned to the country early in June, and remained at home for the summer months, during which time I treated her general health with a view to operation later on. The tumour gradually increased until it attained the size of a large cocoanut, when it became extremely uncomfortable and painful; and as she continued to lose strength, appetite, and spirits, I admitted her into the Stony Stratford Hospital, and performed abdominal section on Oct. 9th, 1887. Ether was administered by my colleague, Mr. H. H. Tidswell; Mr. Pick assisted me, and to his invaluable help I owe much of the success of the operation. Having made an incision between four and five inches in length, and

secured every little bleeding point with clip forceps, the peritoneum was opened and the hand introduced into the abdominal cavity. A large, tense, round, smooth tumour (lying under the liver) was brought to view, being embedded in and attached to the anterior border and under surface of the right lobe of the liver. It had no other attachments. The tumour was tapped with an ovarian trocar, and an attempt made to evacuate the contents, but it became blocked and had to be withdrawn. The anterior part of the tumour was then removed, along with dozens of hydatid cysts, varying from the size of a pigeon's egg to that of a pea, together with a quantity of pale watery fluid. The cyst was thoroughly washed out with warm carbolic lotion (1 in 40), and the cavity of the abdomen well swilled out with a warm solution of perchloride of mercury (1 in 1000). The edges of the cyst were sewn to the abdominal walls with silver sutures, a drainage tube introduced, and the rest of the wound brought together in the usual manner, the utmost caution being taken to include all of the peritoneum. The whole was covered with carbolised gauze and salicylate wool. No further antiseptic precautions beyond those already mentioned were taken. The patient was under ether fifty minutes. She bore the operation remarkably well, and while under ether presented no urgent symptoms. A suppository of two grains of opium was introduced into the rectum. During the day she suffered a good deal of pain in the abdomen at times, but was free from sickness, and in all other respects was fairly comfortable. Nothing but ice was allowed the first day. A second suppository of opium was introduced in the evening. At 8 P.M. the pulse was 114, and the temperature 99°.

From this time up to the termination of the case she made more or less uninterrupted progress. The wound was dressed night and morning, and the cavity of the cyst well syringed out each time with carbolic lotion. The drainage tube was removed on the twelfth day (Oct. 21st), and the sac of the tumour came away on the thirty-fourth day (Nov. 12th). During the whole time the discharge was healthy, except on one occasion, which accounted for the rise in temperature. The morning after the operation the temperature rose to 102·8° and the pulse to 130; but on the second morning the temperature fell to 100·4°, and for the following nine days varied from 98·6° to 100·4°; it then rose for two days to 101°, which was due to a sudden increase of discharge (the only occasion on which it became offensive); but after this relief it rapidly fell, and became normal by Oct. 26th—i.e., seventeen days after the operation. The sutures from the lower part of the wound were removed on the eighth day, the parts being firmly united. On the ninth day two of the sutures from the cyst were removed, and the remaining sutures on the twelfth day. On Nov. 4th—i.e., twenty-six days after the operation—she was able to get up and sit in an arm chair for three hours, feeling pretty well, only weak. By Dec. 20th the wound had so thoroughly contracted that it would scarcely admit the end of a director, and there was but very slight discharge from it. The general health was very good, and she left the hospital that day, cured.

I saw the patient again on April 17th, 1888, when she stated that since her return home the wound had healed, but "at times" only there was a slight discharge, which had continued for the last two or three weeks, with a pricking pain in the parts. On examination I detected two silver sutures about half an inch below the level of the skin; these were easily removed, and the wound healed up in a very few days and became perfectly sound. The girl is now strong and active, and able to resume her usual work.

Among the points of interest in this case, the following may be mentioned. 1. The obscure nature of the tumour, illustrating well the impossibility of forming a correct diagnosis in these cases of abdominal tumours. A very interesting and somewhat similar case is recorded in THE LANCET of Feb. 12th, 1887. 2. The free mobility of the tumour, and the great extent of resonance between it and the liver (when pushed down), suggesting that its origin could scarcely be from the liver. 3. The grave aspect the case assumed on discovering the true nature of the disease. 4. The satisfactory progress of the case, although the suppuration which accompanied the separation of the cyst was so extensive; and likewise the entire absence of any troublesome or serious complication.

Stony Stratford.

## A CASE OF REMITTENT FEVER, WITH PNEUMO-PLEURITIC COMPLICATION;

PIGMENTED BODIES IN THE BLOOD; DESTRUCTION OF BLOOD CORPUSCLES; REMARKS.

By JOHN LUCAS, M.D.,  
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B. D—, a boy aged twelve, came under my care on Jan. 28th, 1888. His father stated that on Jan. 2nd—i.e., twenty-seven days previously—on going to school the patient got wet, after which he complained of headache only, but said he did not otherwise feel ill. For about nineteen days he had been ailing with ague, and his medical attendant found the temperature to be 103° and sometimes 105° at mid-day; this was a few days prior to my first seeing the case. There had been some expectoration; the bowels were regular, and there was no pain anywhere.

When I saw the patient he was a thin, emaciated lad; skin dry and anæmic; temperature 102·4° (at time of my morning visit); features anxious and pinched; tongue coated with thick white fur, inclined to brown, and dry from checked saliva; and herpetic eruption on lips. He was conscious at the time, but was said to wander at night. Appetite poor; breathing difficult; dilated nostrils. On physical examination of the chest &c., the respiration was found to be diaphragmatic and abdominal; both bases were dull on percussion, the right side more than the left; breathing tubular and attended with moist râles, with other signs of double pneumonia. In front the physical signs were those of capillary bronchitis. Sputum frothy and slightly rusty. Liver enlarged slightly; some tenderness in it. Spleen also enlarged a little. Urine: sp. gr. 1010; reaction acid; no albumen; chlorides not absent.

The treatment ordered consisted of linseed poultices to the chest; a mixture containing squill, ipecacuanha, and senega; and milk diet.

Jan. 29th.—Is conscious, but appears to be deaf from previous quinine. Skin hot and dry; temperature in mouth 100·4°; last evening 99·6°; pulse now 132, small and wiry; respiration 44, diaphragmatic and abdominal. Tongue dry, with thick white fur, inclined to be brown. Expectoration freer; same in character. Cough troublesome. The pneumonic signs are much the same, but there is the addition of pleuritic effusion displacing the heart. Bowels moved once. Slept pretty well. A microscopic examination of the blood showed a relative increase in the number of the white cells; the red ones appeared disintegrated, and the pigmented bodies, two of which only were seen in the field, seemed to alter their form and show mobility, and were surrounded by a few red corpuscles which scarcely formed rouleaux; these bodies were spherical and quickly changed to an oblong and semilunar shape, with a black pigmented aspect, having a nucleus in the centre. The temperature of the patient at the time was 100·4°; at noon it was 101·3°; at 5 P.M. 99°. To continue the mixture, and to take ten grains of quinine and three minims of tincture of digitalis at once.

31st.—There appeared to be a maximum rise of temperature towards noon, and a fall in the evening. The boy is lying on the left side. The breathing is easier. He slept pretty well. Wanders a little. Pulse 126, small and wiry. Tongue still furred, white in the centre, but with red tip and edges. Bowels not loose. No tenderness or gurgling in right iliac fossa; no rash. Urine high coloured, clear, and no sediment or froth. Microscopic examination revealed nothing. To continue mixture, and to take the quinine and digitalis twice a day.

Feb. 1st.—Temperature 99·6°. Bowels moved twice during the night. An additional five grains of quinine were given, as it was suspected the pyrexial rise took place at night when the patient wandered. Ordered milk diet, with three ounces of brandy, beef-tea, and ice to suck. At 5 P.M. the temperature went up to 105°. A cold bath was ordered, which brought it down to 100° whilst in the bath, and to 97° on being taken out. An ounce of brandy was now given. Temperature at 6 P.M. 101·2°.

2nd.—Temperature 100·4°. Bowels moved. The bath appears to have done good. His general condition, as far as drowsiness and wandering are concerned, is decidedly better. Is conscious, and not so deaf as before. Tongue