THE DIFFICULTIES IN DIAGNOSIS AND TREATMENT OF HEPATIC ABSCESS.

BY

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THE present relatively high frequency of hepatic abscess as the result of overseas service during the recent war, the difficulty experienced in accurate diagnosis even when the lesion is borne in mind, the dramatic results of emetine treatment—these factors combine to make the disease of great importance at the moment. The following notes of cases which have occurred recently serve to illustrate the difficulties experienced. The fact that a patient has had a liver abscess in the past which has been surgically treated by no means excludes the development of a second abscess at some very considerably later date. The following two cases illustrate this:

J. S., aged 43, served three years in Palestine, developed dysentery in 1918, and was operated upon in Gaza in that year. A large liver abscess was opened and drained. He reached home in February, 1919, and returned to work as a miner. He was admitted to hospital on August 25th, 1920, with intense hepatic pain. There was an operation scar in the region of the gall bladder. Liver dullness at the right base reached up to the angle of the scapula, the edge of that organ being felt four fingers below the costal margin. There was great tenderness over the seventh rib in the axillary line. X-ray examination showed fluid in the right pleura, a fixed diaphragm, and a very large liver. Under treatment this all disappeared, the diaphragm and liver returning to normal and the patient returned to work. He, however, came under observation again in January, 1921, with all the signs of an acute liver abscess, from which over two pints of pus were evacuated. He made a good recovery.

J. A. H., aged 30, had seven and a half years' army service, of which four years had been spent in India. He was operated upon in July, 1913, for hepatic abscess, of which the scars through the right rectus and the eighth rib in the axillary line still remain. He was discharged unfit for further service on account of rheumatoid arthritis in 1914. He was admitted to hospital on June 6th, 1920, on account of vomiting, pain in the right chest and right shoulder. Examination showed crippling of left hip, knee, and foot. The liver was only slightly enlarged upwards, but reached down to the iliac crest, and was very tender; there was slight pyrexia up to 100° F. at night. Under emetine the temperature quickly came to normal, and the liver had returned to its usual dimensions at the end of the usual sixteen-day course of treatment. He has remained well since.

Although cases presenting the syndrome of dysentery, pyrexia, leucocytosis, hepatic pain and enlargement, are generally diagnosed as hepatic abscess, it is important to remember that, although the right dome of the diaphragm may be pushed up and fixed, the pathological condition may still be an acute amoebic hepatitis. It is this condition in which dramatic cure may be effected, and, because this is the early stage of the disease, it is also the condition in which errors of diagnosis are easily committed. The differentiation of hepatitis from abscess formation is usually impossible unless clinical examination or x-ray shows an actual bulging, and even then much surgery can be saved by vigorous emetine treatment—for instance, 1 grain of the hydrochloride night and morning subcutaneously or intramuscularly. So effective is this treatment that radiographic examinations at four-day intervals enable one to follow the diminution in the size of the liver, and the rapidity of recovery in these patients is one of the few curative joys of life vouchsafed the physician. The patient in a week or so is converted from a sallow-complexioned, wasted, sweating wreck to a comparatively normal individual with no pyrexia and no pain.

The accompanying temperature chart shows how easily these cases may be mistaken in the early stage for an enteric group infection. The temperature in this case came to an abrupt end on the exhibition of emetine, which was prescribed on account of the hepatic enlargement discovered on clinical examination.

A history of definite dysentery is not by any means always obtainable, but two forms of bowel looseness appear to be frequently associated with this grave complication: (1) Diarrhoea occurring at night, the bowel acting three or four times, and (2) two or three loose evacuations in the morning between breakfast and luncheon, intestinal peace reigning for the rest of the day. It is possible that this variety of bowel reaction to amoebic

infection is not sufficiently severe either to send the patient for expert advice or to arouse at home the suspicion that the entamoeba is the responsible agent. Hence the con-

A = On admission. B = Blood culture negative. One grain of emetine was given on the fourteenth day, and thereafter one grain in the morning and one-third of a grain in the evening on each day from the fifteenth to the twenty-third day; one grain was given on the morning of the twenty-fourth day.

dition goes untreated and uncured, giving rise to hepatic infection later. The following case illustrates this:

A. A., aged 43, served in Mesopotamia from 1916 to 1918, contracting dysentery in 1917, for which he was invalided to India. He has suffered from a slight diarrhoea ever since his return to England in May, 1919. The bowels have been open three or four times every morning, but he has been comfortable for the rest of the day. He was admitted to hospital on August 21st, 1920, with pain in the right hypochondrium and pyrexia up to 100° F. of one week's duration. The complexion was sallow and the patient obviously in great pain. The skin of the right lower ribs was blistered by the application of mustard leaves and hot-water bottles prior to admission. There was dullness at the right base for a handbreadth up, but the liver edge could not be felt. He was acutely sensitive to any pressure over the right lower ribs. X-ray examination revealed the right diaphragm pushed up and fixed by the hepatic enlargement. Under emetine the pain and tenderness rapidly disappeared, the liver enlargement more slowly, but on September 28th, 1920, the patient was discharged with only very slight limitation of right diaphragmatic movement. He looked very well and has remained so till now.

On the other hand, grave difficulty may arise from the scarring which must follow the evacuation of a liver abscess. The following case is still a source of anxiety, and has been so for some weeks past.

W. H., aged 50, served in India from 1896 to 1912, where he contracted both dysentery and malaria. He rejoined the army in 1915, and was operated upon in that year at Grantham for a liver abscess. In 1916 another operation was undertaken at Herne Bay for the repair of a hernia which had developed at the site of the wound. He came under observation in February, 1921, for malaria and a recent recurrence of dysentery. There was a central epigastric scar, through or in the thin wall of which hepatic tissue was visible. The upper limit of the liver was normal, but its edge reached two fingerbreadths below the costal margin. It was not tender. No splenic enlargement and no malaria parasites were found. There was an extensive fistula in ano with three separate openings, from which much pus and some blood was discharging. No entamoebae were found in the stools, but the x-ray examination revealed a large liver, with some impaired movement of the right diaphragmatic dome and a very obvious bulging upwards just to the right of the pericardium. There was no pyrexia, no leucocytosis, no pain, and no tenderness, but the patient had a very marked clubbing of the fingers for which no cause could be found.

The fistula was excised and rapid healing took place; histological examination of the tissue showed no entamoebae. The patient remains quite well, the x-ray appearances being attributed to the cicatrix of his previous abscess, since no change in its appearance has taken place in three months. The disturbing factor of his clubbed fingers remains unexplained, but he is emphysematous and may possibly belong to the group now designated Ayerza's disease.

The case below is worthy of record owing to the rarity with which amoebic abscesses are found in the lesser peritoneal sac.

R. C. P., aged 23, contracted dysentery at Cantara in April, 1919. He was demobilized in September, 1919, and had been ill ever since with pain in the chest and abdomen, accompanied by constipation. He was seen on November 11th, 1919, and found to have hectic temperature, sweating, wasting, extreme prostration, and a curious earthy pallor. The lower thorax and abdomen were held rigid, and a large tumour mass was both seen and felt in the left hypochondrium, which was acutely tender. Mr. Graham Simpson of Sheffield Royal Hospital very kindly operated upon this urgent case: incision through the left rectus revealed the left lobe of the liver, and a large fluctuating swelling the size of a coconut was felt in the lesser sac behind the stomach; this was drained through the lesser omentum. On the third day after operation consolidation of the right pulmonary base was found. On the fourth day emetine was started; the temperature became normal in three days and remained so, recovery being uninterrupted.

It is scarcely necessary to observe that every liver abscess, though solitary, is not due to the entamoeba, as the two following anomalous cases show:

P. P., aged 29, served in Ireland four and a half years, France five months, Mesopotamia three years, being demobilized in August, 1919. He contracted malaria, and in September, 1918, received a blow on the chest from a spade handle. A swelling developed painlessly, and was opened in December, 1918; a discharging sinus remained, which was again operated upon in February, 1919. When seen on January 30th, 1920, there was still a discharging sinus around the right seventh rib in the mid-clavicular line. There was no pyrexia, no enlargement of liver or spleen, no enlarged glands, and no signs in the lungs. The Wassermann reaction was negative. X-ray examination showed no enlargement of the liver. Operation revealed a hydatid cyst of the upper surface of the diaphragm, removed with much difficulty, the sinus taking several weeks to heal.

H. W., aged 24, a machinist (female), had suffered from pain in the right side for the past three months, but had only been off work for the past three weeks. When first seen on March 15th, 1921, she looked flushed and very ill, with great dyspnoea and a rapid pulse. The heart's apex beat was in the third space in the nipple line on the left side. Dullness at the right base extended up to the third rib in front, and on the left side to the sixth rib in the lateral line. The right chest was tapped, and thirty-four ounces of clear but spontaneously coagulable fluid was drawn off. The hectic temperature continued, and the dyspnoea was but little relieved. The apex beat returned to the fifth space in the nipple line, but the right-sided dullness persisted, although the left had disappeared. A needle was introduced into the right chest on two subsequent occasions, but only blood was obtained. The liver edge reached below the umbilicus throughout.

The chest was explored, as it seemed likely that the trouble lay beneath the diaphragm, and a huge suppurating hydatid cyst of liver was found which during the operation burst into the lung, producing some haemoptysis. The blood showed a marked leucocytosis but no eosinophilia. Later it was found that complement fixation, using the clear fluid obtained from daughter cysts, gave with the patient's serum a complete fixation in 1 in 20 dilution and delayed lysis in 1 in 40 dilution. With two controls no fixation was obtained. This patient had never lived outside northern England. Her death, which occurred on the fifth day after operation, was hardly surprising in view of the great extent of hepatic damage.

To my surgical colleagues, Mr. W. R. Douglas, Mr. John Morley, and Mr. Geoffrey Jefferson, for their ever ready help and advice in these difficult and anxious cases, I would offer my grateful thanks.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

SUDDEN DEATH FROM ASPHYXIA FOLLOWING REGURGITATION OF SEMI-DIGESTED FOOD.

As the following case possesses some medico-legal interest it has been thought advisable to bring it to general notice.

A man, aged 52, was brought in dead to King Edward VII Hospital, Cardiff, on the evening of November 7th, having shortly before died suddenly in a hotel bar. The *post-mortem* examination was made on the morning of November 9th. The body was that of a well-preserved, well-developed man, and, beyond a slight abrasion on the right forehead, there was nothing abnormal in the external appearances of the body. *Post-mortem* staining and rigor mortis were present, but there were no traces of lividity.

On opening the body it was noticed that the veins of the neck were greatly distended with very dark fluid blood; this escaped on severance of the veins, leaving the large veins and right side of the heart without a trace of blood. The escaped blood clotted quickly outside the body. The fluidity of the blood within the body is attributed to the suddenness of the death, the subsequent cooling of the body, and the absence of factors facilitating deposition of blood platelets. Apart from dilatation of the chambers, and a slight increase of epicardial fat, the heart was in very good condition.

The lungs were engorged with dark blood, which brightened on exposure to the air. There was no oedema and but very slight emphysema. Impacted in both bronchi, in the right to a greater extent than in the left, was some creamy pulsatous material, which extended into the bronchioles of both lungs. There was no inflammatory reaction. Traces of the same material were found in the trachea, larynx, and oesophagus, none of which showed any evidence of inflammation. On examination, the material appeared to be composed of semi-digested food; the total quantity present did not exceed two tablespoonfuls.

The stomach was almost empty. The mucous membrane of the oesophageal antrum showed capillary engorgement and rugae were present. The pyloric antrum, on the other hand, showed digested rugae and the presence of a few cubic

centimetres of semifluid digested material tinged with altered haemoglobin and emitting an odour of stale alcohol. The other organs of the body, including the brain, were free from any pathological condition, apart from some venous engorgement.

There was therefore presumptive evidence of the ingestion of some irritant on an almost empty stomach containing the remains of a semi-digested light meal, followed by vomiting and regurgitation into the larynx and trachea, and so into the bronchi and bronchioles, producing speedy suffocation. The irritant action of the ingested material was evidenced by the condition of the mucous membrane of the oesophageal antrum and its preservative nature by the persistence of the rugae at this site. The odour of the stomach contents suggested the alcoholic nature of the irritant. These findings were borne out by the details related at the inquest. His last meal, taken at 5.30 p.m., consisted of tea and bread-and-butter. He arrived at the public-house at 8.20 p.m. and sat drinking until 9.30 p.m., when he was noticed to gasp for breath, his head fell back, and his pipe dropped out of his mouth; death appeared to be practically instantaneous. It is conjectured that on account of the presence of some women friends he attempted to suppress the vomiting which took place.

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A CASE OF PELIOSIS RHEUMATICA.

In view of the recent discussion on the phenomena of acute rheumatism, the following case may be of interest.

A man, aged 26, was taken ill on November 14th with joint pains. He remained at work until November 16th, when he contracted a sore throat and took to his bed. He was admitted to the Ham Green Hospital, Bristol, on November 17th as a suspected case of diphtheria. On admission his throat was very congested, with a small ulcerated patch on the left tonsil; the tongue was furred. He complained of pain and stiffness of the joints, and fluid was detected in the right knee-joint. The heart sounds were normal, the temperature 100°, and the pulse 98. He was given a small dose of diphtheria antitoxin and large doses of sodium bicarbonate and sodium salicylate. He got no relief even after the salicylates had been pushed further. On November 20th raised areas of large haemorrhagic patches appeared on the left hip, both knees, and on the forehead. There were purpuric patches also on the palate. There was no eruption on the back. Further patches of ulceration appeared at the base of the uvula and on the lower lip. The joint pains were still present; aspirin was substituted for sodium salicylate, but with no better result. On November 21st the temperature rose to 103°, and remained there for forty-eight hours; it dropped to normal on November 24th, and remained down. The joint pains and patches of ulceration cleared up rapidly, and he was discharged on November 29th. During the height of the fever there was a thick cloud of albumin in the urine. The throat swabs were negative to diphtheria and Vincent infection.

The combination of joint pains, sore throat, and purpuric eruption was first described by Schönlein under the name of peliosis rheumatica, but it appears to differ from acute rheumatism in the following respects:

The joint pains are not nearly so severe as those of acute rheumatism, and the patient can move about with a fair degree of comfort.

The profuse sweating so characteristic of acute rheumatism is absent. Endocarditis does not occur.

Salicylates appear to have no effect whatsoever on the joint pains or the temperature.

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At a recent meeting of the Fédération Internationale at the Hague it was decided to hold an international dental congress at Madrid, to which Germans and Austrians would be invited.

A LARGE number of professorial chairs are vacant in Prussian universities, including those of radiology, history of medicine, embryology, and laryngology at Berlin; medicine, medical jurisprudence, and pharmacology at Königsberg; pathological anatomy, medical jurisprudence, and dentistry at Bonn, and pharmacology at Kiel.

THE Ministry of Food in Germany has formed a committee to promote scientific investigations on food. The committee consists of Professors Abderhalden and Rubner for the physiology of nutrition; Baur and G. Haberlandt for vegetable physiology; A. Haiduschka, A. Juckernack, and T. Paul for the chemistry of food; R. O. Neumann for bacteriology and alimentary hygiene; F. Müller for chemical questions, and R. Kuczynski for statistics.