indications of what was regarded as residual inflammatory infiltration of the infected meninges*; that is, the left arm and leg were still somewhat spastic and, when excited, the child's eyes turned strongly to the left. On the sixteenth day the cerebrospinal fluid was found clear and sterile on culture.

After three weeks the left arm and leg were being moved freely, and the deviation of the eyes had ceased. Movements of the left arm and leg became more frequent, and by the twenty-second day movements of the limbs appeared normal with the exception of slight spasticity of the left hand. By the end of the fourth week the spasticity of the left hand had disappeared and recovery was apparently complete.

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Spontaneous Intraperitoneal Haemorrhage due to Haemangioma of Liver

Haemangioma of the liver is common, but few cases give rise to any symptoms. The following case is exceptional in that it caused an acute abdominal emergency.

CASE REPORT

The patient, a man aged 61, was admitted to hospital as an emergency on July 28, 1949. Two and a half days previously he had complained of acute pain in his upper abdomen, which had radiated to his left shoulder. For the past 36 hours he had been vomiting. His bowels had not acted for 24 hours. He gave a long history of "chronic dyspepsia," but investigation elsewhere had on more than one occasion proved negative for peptic ulceration and no definite diagnosis had been made. He had a right inguinal hernia satisfactorily controlled by a truss. There was no history of injury.

On admission his temperature was 101.4° F. (38.55° C.), pulse 124, and respirations 28. His tongue was dry and furred. The heart and lungs showed no appreciable disease. There was acute tenderness with guarding in the epigastrium and right hypochondrium, and this extended into the right flank and down to the right iliac fossa. The left side of the abdomen was relatively free. Bowel sounds were not heard; there was no palpable tumour and no cutaneous angiomas. Examination per rectum revealed some tenderness on the right side only. A provisional diagnosis of perforated duodenal ulcer was made.

Operation.—A right paramedian incision was made, and on opening the peritoneum blood welled out. This was readily seen to be coming from a dark mass at the edge of the left lobe of the liver. The spleen, stomach, duodenum, gall-bladder, and appendix were normal. The sucker was in continuous use withdrawing blood. The diaphragmatic surface of the left lobe of the liver was seen to be covered by a thin-walled angiomatous formation with a clear-cut margin which did not extend to the right lobe. At the anterior edge there was a small perforation through which the blood was escaping. Dr. Stewart Smith, the pathologist, kindly came to the theatre and confirmed the diagnosis of haemangioma of the liver. A wedge biopsy of the growth was taken, including the perforated area, and

*The following morbid processes were envisaged in relation to the symptoms: the original inflammation of the pia-arachnoid had been followed by the development of purulent exudate in the subarachnoid spaces, especially at the base, and also along the posterior surface of the spinal cord and possibly surrounding the nerve roots.

haemostasis was achieved by mattress sutures over "calgitex" gauze. The wound was closed in layers with drainage.

The patient made a good recovery. He received three pints (1.7 litres) of blood, and, except for a slight discharge from the site of the drainage tube, had an easy convalescence. The report on the histopathology, dated August 5, showed "a capillary haemangioma in the liver with a central large organizing thrombus."

In view of the danger of a recurrent haemorrhage from this growth, a further operation was performed on August 31, with the intention of performing a formal resection of the left lobe of the liver. However, on opening the abdomen through a transverse incision, the left lobe was found to be adherent to the diaphragm and it was thought best to leave well alone. The second incision healed with some delay owing to infection. The patient was discharged on September 22.

COMMENT

When a haemangioma of the liver gives rise to symptoms it usually presents in one of three ways: (1) a mass which is otherwise symptomless is found at laparotomy to have this origin (Morris, 1940; Shumacker, 1942); (2) there are signs of obstruction (Wakeley, 1924-5); or (3) vague dyspeptic symptoms are the complaint, and on laparotomy for some other suspected lesion a haemangioma is found, without any other pathological lesion (Shumacker, 1942).

Very rarely does spontaneous rupture occur, though haemorrhage at operations may be fatal (Mantie, 1903) or exceedingly troublesome (d'Errico, 1946). Ewing (1928) states that it may occur as the tumour slowly increases in size, and that it is usually fatal. When spontaneous rupture does occur the diagnosis of acute appendix, ruptured ectopic, or peritonitis has been made (Marckstradt, 1938). When treatment has been undertaken the tumour has been resected, and the danger of incising the tumour itself has been repeatedly stressed (Mantie, 1903; d'Errico, 1946). Most of the tumours resected have, however, been pedunculated, or it has been possible to form a pedicle.

The above case had the indefinite digestive troubles for which no other cause was found at operation, with the superimposition of the acute surgical emergency. At the first operation resection of the growth would have necessitated removal of the whole left lobe of the liver, a procedure which the patient's condition would not at the time warrant. While cutting the wedge biopsy haemorrhage was controlled by compressing the free edge of the lesser omentum and hepatic pedicle, and on tying the mattress sutures over the haemostatic gauze no further leak occurred. This was probably owing to the capillary nature of the growth as compared with the cavernomata, into which category the reported troublesome tumours fell, and to some extent to the haemostatic qualities of the gauze.

However, at the second operation an attempt to separate the adhesions between the diaphragm and the liver would probably have caused severe haemorrhage, while their presence, on the other hand, greatly reduces the risk of any further spontaneous haemorrhage.

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