general peritoneal cavity. All patients with a mass or peritonitis were drained so that a tract for any exudate would be left from the site of the inflammatory lesion to the exterior. In all 42 patients the appendix was removed at operation. Post-operative measures were directed towards obtaining rest for the patient, and rest in particular for the alimentary canal. Morphine was given liberally, and when necessary continuous gastric suction and intravenous therapy were employed. The semi-Fowler position was adopted for all patients. Sulphonamides were used either by mouth or intravenously in one-third of the cases.

Results of Treatment

There were eight deaths among the 42 patients. Three occurred in 11 patients aged 1-2 years; the remaining five deaths were among the 30 patients aged 2-3 years. The most important factor in mortality was the presence of general peritonitis. No fewer than seven of the 15 patients with general peritonitis died. The remaining death in the series was that of a patient with a mass and an abscess who developed a general peritonitis after operation. The other important factor in relation to mortality was the length of time the child had been ill before admission to hospital. Seven of the eight children who died had been ill for longer than 48 hours, while the other child had been ill for 40 hours.

Conclusions

It is readily evident that the two major problems in appendicitis in the young child are: (1) How can an early diagnosis be established and so avoid complicated appendicitis with the accompanying high mortality and morbidity? (2) What is the best treatment for a patient with a complicated appendicitis, especially if general peritonitis is present?

Early diagnosis, within 12 to 24 hours of the onset, will be established only by better clinical training of the student, the family physician, and the paediatrician. This is the task of the clinical schools and societies. The two chief reasons for delay in the diagnosis are, first, a failure to suspect appendicitis at this age, and, secondly, a failure to take enough care with the history and clinical examination. It is not sufficiently appreciated that a single clinical examination is often inadequate and that several may have to be made before the physical signs are accurately determined. Rarely, late diagnosis is due to parents bringing their children for examination at a late stage of the illness.

The management of the patient with a complicated appendicitis presents a problem regarding which there is often a difference of opinion. Two main questions require an answer: (a) Should surgery be undertaken as soon as the patient's condition will permit, the object being drainage of pus and removal of the highly septic appendix if possible? (b) Should the body and alimentary canal be put at rest to allow the healing processes either to localize or to resolve the inflammation, the appropriate surgical treatment then being carried out?

While the main purpose of this paper is to assist the practitioner in establishing a diagnosis early and thus prevent complicated appendicitis, many problems concerning the complicated disease require to be solved. I would suggest that the different paediatric schools study these problems involved in the treatment of the complicated disease. Active clinical investigation would be an important measure in clarifying the clinical features for the student, house-physician, general practitioner, and paediatrician, and thus facilitating early diagnosis.

I am indebted to Prof. J. C. Spence and Dr. Donald Court for reading this paper.

ENDOCYME FOETUS IN A FIJI INFANT

BY

R. W. D. MAXWELL, M.B., Ch.B.

Medical Officer, Colonial Medical Service, Fiji

It is felt that the following case is of sufficient rarity and interest to merit its being placed on record: I am not aware of a similar case of *foetus in foetu* having previously been reported from this Colony.

Case History

On Aug. 20, 1940, a Fijian female infant was admitted to the Lautoka District Hospital, Fiji, having been brought from Tavua, one of a small group of islands off the west coast of Viti Levu. The infant's age was later checked by reference to the provincial register of native births, and it was shown to have been born on April 11, 1940. Its age, therefore, at the date of admission was a few days over 4 months.

The mother being uneducated and rather unintelligent, an accurate history was difficult to obtain. She stated that the infant was the result of her first and only pregnancy. Nothing untoward had occurred during the pregnancy and she had remained well throughout. Labour had been quite normal, the mother being unattended until after delivery of the infant, when a native nurse had arrived in time to divide the cord and conduct the third stage. The infant had appeared perfectly normal at birth and nothing unusual was noticed until it was about three months old. The abdomen then began to enlarge, and continued to do so during the next month up to the time of admission to hospital. Over the same period the infant's general health had shown some impairment and its limbs had become thinner.

Both parents of the infant were of pure Fijian descent. There was no history of multiple births or of any congenital abnormalities on the mother's side. As the parents were unmarried and the father did not appear, his family history could not be obtained. The mother's age was about 26 years.

Examination of the infant showed it to be rather small for its age and poorly nourished, but there was no marked wasting. The abdomen was greatly enlarged, especially above the umbilicus, the enlargement appearing diffuse and symmetrical. On palpation the upper two-thirds of the abdomen was felt to be occupied by a large firm mass, irregular in outline and movable only within a narrow range.

On Aug. 22, under general anaesthesia, the abdomen was opened by a median supra-umbilical incision. The abdominal wall was greatly thinned from overstretching. The lower border of the stomach was seen crossing the upper angle of the abdominal opening, and below this the great omentum was spread out over a large smoothly rounded mass. An opening was then made through the omentum, revealing a smooth, grey solid mass enclosed in a very thin-walled sac. On incising the sac and passing a hand inside it the nature of the mass was finally revealed and a readily recognizable "foetus" was felt. The smooth-walled interior of the sac in which it lay contained a scanty amount of thin clear fluid. Owing to the large relative size of the foetus, the original abdominal incision had to be extended below the umbilicus before it could be delivered through the wound, and delivery was further facilitated by making one or two small incisions in the "head" of the foetus, from which some straw-coloured fluid escaped, thus reducing its size. Owing to the infant's weakly condition and the degree of shock produced by the delivery of the large intra-abdominal mass the operation had to be concluded without delay, and it was not possible to make any detailed exploration of the relations of the sac. It occupied the upper abdomen, lying between coils of small intestine, and was attached to the posterior abdominal wall. No attachments of the foetus to the interior of the sac had been felt. No attempt was made to remove or otherwise deal with the sac. It was left open, replaced in the abdomen, and the abdominal wound was sutured.

The weight of the foetus after removal was 1 lb. 10 oz. (737 g.), and the infant's weight on the day after operation 8 lb. 4 oz.

(3.74 kg.). On Aug. 25 a partial resuture of the abdomen was required, but otherwise the patient made an excellent recovery, and was discharged on Oct. 24, 1940. Her weight was then 11 lb. 4 oz. (5.12 kg.).

The Foetus

This is illustrated in the accompanying photograph. There was a globular cephalic portion constituting rather more than half the total bulk of the foetus. Inside this cephalic portion were a number of fluid-containing cavities, covered in the greater part by skin only. There were two clearly recognizable upper limbs. The right upper limb showed flexures in the

position of elbow and wrist and had four distinct digits with well-defined nails. The left upper limb showed a distinct elbow and wrist, but the hand was less well developed, consisting of a mass in which five partly fused digits appeared to be represented, with a sixth, apparently supernumerary, digit at some distance from the rest. The nails were distinctly seen. There was a wedge-shaped caudal mass with a small terminal appendage arising from the bottom of a small pit-like depression. There was a short slender stump of "umbilical

cord," about 1 in. (2.5 cm.) long, attached to the ventral surface between the upper limb processes. This was not felt before delivering the foetus, but appeared to have been ruptured in doing so. It was apparently the only slender communicating link between parasite and autosite, and, since the foetus at operation had presented by the dorsal surface, it had presumably been attached to the posterior abdominal wall of the infant. The whole foetus was of a pinkish-grey colour and was covered in parts with a thin layer of sebaceous matter exactly resembling vernix caseosa. There was patchy lanugo over the dorsal aspect and the limbs, and a patch of well-developed hair on the anterior aspect of the "head." The length of the foetus was 6 in. (15 cm.) and its weight, as stated, 1 lb. 10 oz. The foetus was therefore approximately one-fifth the weight of the infant at the time of removal, and there was no doubt that it was then still "alive" in the sense that it was continuing to grow.

A skiagram of the foetus was taken after removal. Unfortunately, since a diagnosis was not made before operation, it was not x-rayed *in situ*. A rudimentary spine could be seen and also the long bones in the upper limbs. In the left upper limb the humerus, radius, and ulna were well developed. The wedge-shaped caudal portion of the foetus showed a single long bone, presumably a femur, and apparently represented a rudimentary lower limb.

I have to thank Dr. H. Silvester Evans, Acting Director of Medical Services, Fiji, for permission to publish the case.

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The latter work contains a number of other references to literature on this subject.

The Minister of Health has adopted the following recommendations of the Nurses Salaries Committee concerning the salaries of nurses employed in part-time service. If employed for not more than 30 hours a week: female ward sister, 2s. 11d.; female staff nurse (general trained), 2s. 3d.; female enrolled assistant nurse, 2s. If regularly employed for not more than 30 hours a week, but required on occasion to work for a few hours more, a nurse should be paid for the first 30 hours at the rates listed above and for additional hours as follows: female ward sister, 2s. 7d.; female staff nurse (general trained), 2s.; female enrolled assistant nurse, 1s. 10d. Nurses who regularly work more than 30 hours a week should be paid on the non-resident salary scale for the grade, provided that no nurse employed for more than 30 hours a week receives less than a member of her grade employed for only 30 hours.

Medical Memoranda

Severe Anaemia due to Diaphragmatic Hernia

It does not appear to be widely recognized that herniation of the stomach through the oesophageal hiatus of the diaphragm, often with minimal gastro-intestinal symptoms, may be associated with severe anaemia.

Hiatus hernia with ulceration was described by Richard Bright in 1836, but it was considered an uncommon condition until recent years, when improvements in radiological technique have made it clear that it is not infrequently the cause of upper abdominal symptoms. Radiological examination should include examination of the stomach in the supine, prone, and Trendelenburg positions in addition to the erect.

That hiatus hernia is capable of causing bleeding was emphasized by two American workers in 1943. Murphy and Hay (1943), examining the findings in 72 patients with hiatus hernia, of whom 84% were females, found the average age to be 60 years; pain was a prominent feature and anaemia was almost as frequent, for 27% of patients had a marked microcytic anaemia. Sahler and Hampton (1943) found either anaemia or a history of gastro-intestinal haemorrhage in 14.5% of a series of 221 patients with hiatus hernia. Chevallier and Danel (1944) and Mendelsohn (1946) reported cases of hiatus hernia with severe anaemia, the latter finding hiatus hernia in 16 out of 1,000 consecutive gastro-intestinal radiographs, three of which patients had bleeding as a symptom.

Gastroscopic and post-mortem examinations in cases of hiatus hernia with anaemia (Sahler and Hampton, 1943) have indicated the cause of the bleeding to be the constricting effect of the diaphragm on the herniated stomach, so that venous engorgement and oedema, with submucosal haemorrhages and shallow ulcerations, occur. Peptic ulcer of the lower oesophagus is a rare cause (Bock, Dulin, and Brooke, 1933).

CASE REPORT

A married woman aged 64, with two children, had always enjoyed good health and had run a small shop unaided. For two weeks before admission to hospital she had been feeling increasingly weak and tired, was dyspnoeic on little effort, and had noticed swelling of the ankles. Appetite and bowel habit were unchanged, no darkening of the stools had been apparent, and she had not lost weight. On direct questioning the only other symptom to which she would admit was a feeling of fullness behind the mid-sternum. This was not troublesome and was attributed by the patient to having her meals disturbed by attending to customers in her shop. This symptom had been present for six months.

On examination the patient was seen to be somewhat obese, with marked pallor of skin and mucous membranes, ankle oedema, and dyspnoea on slight effort. There were no other abnormal physical findings. A blood count showed: haemoglobin (Haldane), 30%; red cells, 2,424,000, moderate anisocytosis and poikilocytosis; colour index, 0.63; white cells, 6,800. Examination of the sternal marrow revealed erythropoiesis, normoblastic in type and active. The faeces contained no macroscopic blood, but occult blood was present. Fractional gastric analysis revealed normal acidity. Gastric radiographs taken in the supine position showed the oesophagus entering the stomach in the abdomen, and a large part of the stomach herniated through the oesophageal hiatus into the thorax. The hernia was not visible in the erect position. Ulceration was not seen in oesophagus, stomach, or duodenum. A barium enema showed no colonic abnormality. Chest radiographs revealed no abnormality. The patient responded very rapidly to blood transfusion (2 pints (1.14 litres) of concentrated cells) and intensive iron therapy. Two weeks after admission the haemoglobin was 72% and red cells numbered 4,660,000. One must conclude that in any case of unexplained microcytic anaemia full consideration should be given to the possibility of hiatus hernia.

Our thanks are due to Dr. S. Almond for helpful criticism and for permission to publish this case, to Dr. Goldman for examination of the sternal marrow, and to Dr. Morris and Miss Lowe for radiological examinations.

N. J. ROUSSAK, B.Sc., M.B., Ch.B.

Jewish Hospital, Manchester. S. EDEN, M.R.C.S., L.R.C.P.

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