tumour three months after orchidectomy and two years after first noticing a testicular enlargement. The second twin had a right orchidectomy for a seminoma at the age of 31, and was alive and well four and a half years later. Domrich (1939-40) reported testicular embryonal carcinomas occurring in identical twins, one of whom died at the age of 35, three months after orchidectomy. We observed two brothers, identical twins, who bore a remarkable likeness to each other in that they were both cryptorchids and developed seminomas in the fifth decade of their lives.

CASE REPORTS

Twin I, a childless married man then aged 40, was seen in March, 1954, complaining of lower abdominal pain, and occasional shooting pain down to the perineum. He was found to have emphysema, bilaterally undescended testes, and a palpable tender mass 10 cm. above the symphysis pubis. A right abdominal testicular mass was removed in June, 1954, when masses of involved lymph nodes were noted to be present along the abdominal aorta. He received a post-operative course of radiotherapy, and was fit and well seven years after laparotomy.

Operation Specimen.—The excised testis measured 15.5 by 10 by 7 cm. and weighed 693 g. It was encapsulated, but at one aspect the tunica albuginea was superimposed by a flat, button-shaped tumour mass, measuring 2 cm. in diameter and 8 mm. in height. Microscopical examination showed the testicular mass to be a typical seminoma, while the substance of a para-aortic lymph node had been replaced by identical tumour tissue.

Twin II was admitted to hospital in January, 1959, at the age of 44 on account of a large lower abdominal mass. He was unmarried and a cripple owing to post-encephalitic Parkinsonism since the age of 10, but was of unimpaired intelligence. Bilateral cryptorchidism was noted. At laparotomy the mass was found to be a tumorous abdominal left-sided testis. It was removed, but there was considerable involvement of the para-aortic lymph nodes, and the pelvis was almost completely filled with growth. Pulmonary metastases were absent but he died of cachexia and bronchopneumonia two months after laparotomy.

Operation Specimen.—The excised testis measured 15 by 13 by 11 cm. and weighed 1,240 g. It was only partly surrounded by an intact capsule. Microscopical examination showed again the typical features of a seminoma.

COMMENT

The increased likelihood of malignant change in undescended testes is well known, and is reported to be 48 times greater than in scrotal testes; or, expressed differently, 1 in 20 abdominal testes might be expected to become neoplastic, and 1 in 80 inguinal testes (Dixon and Moore, 1952). Both twin brothers had undescended testes and malignant change occurred in both within a few years of each other in the fifth decade. In one twin the tumour arose in the left, in the other in the right testis. It is also known that bilateral cryptorchidism is present in a third brother. Combined surgery and radiotherapy resulted in cure in twin I, but in twin II the disease was too far advanced for successful treatment.

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Steatorrhoea due to Dissecting Aneurysm of the Superior Mesenteric Artery

Failure of the blood supply to the small intestine as a result of thrombosis or embolism of the superior mesenteric artery has been described as an uncommon cause of steatorrhoea in four cases (Hawkins, 1957; Joske *et al.*, 1958; Shaw and Maynard, 1958). The following additional case presented difficulty in diagnosis.

CASE HISTORY

The patient, a retired fisherman aged 51, was admitted to another hospital in March, 1960. For four months he had suffered from frequent attacks of left-sided lower abdominal pain, unrelated to meals and of increasing severity and frequency. The pain had been associated with anorexia, vomiting, and constipation. By the time of admission he had lost 3 st. (19 kg.) in weight.

The chief findings were as follows: mild generalized rheumatoid arthritis; slight left lower abdominal tenderness; rectum full of faeces; blood-pressure, 190/120 mm. Hg; proteinuria, 1-7 g./l. (Esbach); blood urea, 45 mg./100 ml.; serum concentration of Na⁺, K⁺, Cl⁻, and HCO₃⁻, normal; haemoglobin, 14.1 g./100 ml. White blood cells, 12,200/c.mm. (neutrophil polymorphs 87%). Plain x-ray of abdomen, normal. Sigmoidoscopy, normal. Barium enema, a few diverticula of the pelvic colon only.

The patient's condition seemed to improve after evacuation of the rectum, and he was discharged.

Dissecting aneurysm of superior mesenteric artery. (Weigert Elastic. $\times 8.5$.)

He was readmitted to the same hospital three months later with a recurrence of symptoms and further loss of weight. There were no additional physical signs. Serum proteins, total 5.3 g./100 ml. (albumin 4.6 g., globulin 0.7 g.). Erythrocyte sedimentation rate, 37 mm./hr. (Westergren). Barium meal showed normal oesophagus, stomach, and duodenum. Gastric cytology, normal.

Subsequently he began to pass blood and mucus intermittently in the stools, and was finally admitted to the Royal Victoria Infirmary in August, 1960. By this time he had become emaciated. Haemoglobin, 9.9 g./100 ml.; M.C.H.C., 29%; white blood cells, 15,100/c.mm. (neutrophil polymorphs 88%). Blood film showed hypochromic anaemia. Erythrocyte sedimentation rate, 95 mm./hr. (Westergren). Serum proteins: total, 6.7 g./100 ml. (albumin 3.4 g., globulin 3.3 g.). Electrophoresis: Marked increase in alpha₂ globulin. Percutaneous renal biopsy: Renal scarring and glomerular fibrosis, but appearances non-specific. Laparotomy: Gross oedema of the omentum and mesentery of the small bowel and transverse colon, with free intraperitoneal fluid and fibrin clots. Rather pale intestine. Gastrostomy, biopsy of stomach, liver, and mesenteric lymph node: normal.

Findings after Operation.—Five-day faecal fat excretion: 22.2 g./day (as stearic acid) (normal <6 g./day). 50-g. oral glucose tolerance test (g./100 ml.): fasting, 0.077; 30 minutes, 0.12; 60 minutes, 0.127; 90 minutes, 0.155; 120 minutes, 0.155; 150 minutes, 0.105. Folic acid excretion test: 24-hour urine output after 5 mg. intramuscularly, 0.9 mg.; 24-hour urine output after 5 mg. orally, 0.7 mg.; this finding was considered to indicate marked tissue desaturation of folic acid, since in this laboratory the urinary excretion of folic acid after an oral dose should be over 75% of that after a parenteral dose, and an output of less than 1.6 mg. after an oral dose of 5 mg. is suggestive of malabsorption. One-stage prothrombin: 100% of normal average (Quick). Radiology of small bowel: Rather slow transit of barium, little of which had reached the terminal ileum by 6 hours; ileal pattern disordered, with loss of normal corrugations and with flocculation and fragmentation of the barium column, suggesting admixture with non-opaque intestinal contents.

A diagnosis of polyarteritis nodosa was made, but despite steroid therapy the patient died.

Necropsy Findings.—Small intestine: congested, containing serosanguineous fluid and showing multiple small mucosal ulcers, particularly in the ileum. Pelvic colon: diverticulosis. Superior mesenteric artery showed what appeared to be a number of small aneurysms (the largest being 1 cm. in diameter) situated closely together about 3 cm. from its origin. They appeared to be completely occluded by thrombi. Abdominal aorta: patchy atheroma. Other visceral arteries, normal. Pancreas, normal.

Histological Examination.—Superior mesenteric artery showed a dissecting aneurysm, the vessel being the seat of severe atherosclerosis; dissection had originated at the site of rupture of the intima and internal elastic laminae, with marked reduction of the true lumen of the vessel and organization of the extravasated blood. Small intestine showed acute non-specific mucosal ulceration; further details were obscured by autolysis. Kidney showed active glomerulonephritis with capsular crescent formation and cortical areas of fibrosis. Pancreas normal.

DISCUSSION

Reported cases of dissecting aneurysm of vessels other than the aorta have been reviewed comprehensively by Watson (1956) and Foord and Lewis (1959). It appears that only six cases of a similar aneurysm affecting the superior mesenteric artery have been described (Bauersfeld, 1947; Foord and Lewis, 1959; Ralston and Wasdahl, 1960). Five of these showed atherosclerotic changes like those in the present case.

Malabsorption due to intestinal ischaemia may possibly be caused by abnormalities of lymph flow (De Langen, 1953) or mucosal damage (Joske *et al.*, 1958; Shaw and Maynard, 1958). Protein-losing gastroenteropathy (Davidson *et al.*, 1961) and fat malabsorption (Vaughan Jones, 1961) are known to occur in chronic congestive heart failure, which may also cause steatorrhoea due to pancreatic insufficiency (Masoni and Pelligrini, 1953; Nicol, 1961), and lymphatic (lacteal) dilatation has been demonstrated in idiopathic hypoproteinaemia (Gordon *et al.*, 1959). Abdominal pain due to intestinal ischaemia has been recognized for some time (Klein, 1921; Dunphy, 1936).

The actual date of dissection in the present case is impossible to define. Symptoms began 10 months before death, but definite macroscopic abnormalities were first found at laparotomy only four weeks before the latter. The clinical features he presented are considered to be due to malabsorption complicating intestinal ischaemia.

The diagnosis of steatorrhoea complicating chronic small-bowel ischaemia may be difficult, and it has been suggested that many such cases are misdiagnosed as idiopathic sprue or chronic pancreatitis, but a history of chronic recurrent colicky abdominal pain and fatty stools is highly suggestive of intestinal ischaemia (Shaw and Maynard, 1958). A bruit may be audible over the narrowed vessel, a well-recognized occasional finding in stenosis of other arteries. Radiological investigation of the small bowel may or may not be helpful (Dunphy, 1936; Shaw and Maynard, 1958; Joske *et al.*, 1958). The diagnosis may be confirmed by aortography and laparotomy and curative surgery attempted (Joske *et al.*, 1958; Shaw and Maynard, 1958).

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The Federal Ministry of Health of Rhodesia and Nyasaland has announced that midwifery training is to be introduced in the Federation, and that the first one-year course, which is restricted to State Registered Nurses, started recently at the Harare Central Hospital. There are ten students on the first course—two European, two coloured, and six African nurses.