"aramine" (metaraminol) intravenously, since it has relieved induced coronary insufficiency in experimental animals.—I am, etc.,

The National Hospitals for Nervous Diseases, London W.C.1. K. DAVISON.

REFERENCE

[1] Davison K., and Smith, B. J., *Brit. med. J.*, 1960, **1**, 1400.

Acute Appendicitis in Situs Inversus

SIR,—The uncommon occurrence of situs inversus prompts us to record a case which presented with acute appendicitis. The patient, a man of 47 years, had served in the armed Forces and had had a haemorrhoidectomy performed four years previously but was still unaware of his anatomical abnormality.

He was seen by one of us (H. L. C.) for pain in the left iliac fossa and found to have transposition of the liver as well as dextrocardia. A diagnosis of acute appendicitis was confirmed at operation through a left gridiron incision.

We feel that patients with situs inversus should be informed, as in some circumstances there might be delay in the diagnosis of acute abdominal conditions. Hershman[1] reports a case of appendicitis in a boy aged 17 years, but in middle age a mistaken diagnosis of diverticulitis might be made. It is of interest that in our case the right testicle did not hang below the left as reported by Birch.[2]—We are, etc.,

Winchester, Hants. H. L. CRAIG.
St. George's Hospital, London S.W.17. DOUGLAS M. MILLAR.

REFERENCES

[1] Hershman, M., *Brit. med. J.*, 1952, **1**, 1357.
[2] Birch, C. A., ibid., 1952, **2**, 165.

Infection of Aortic Aneurysm with Salmonellae

SIR,—The case reported by Drs. R. D. Hyde and P. K. B. Davis (January 6, p. 30) prompts us to record another example of this interesting condition.

A 55-year-old retired engineer developed typhoid fever whilst travelling from South Africa to England by ship in May, 1957. On arrival he was admitted to another hospital from which he was discharged clinically well after receiving a 33 g. course of chloramphenicol.

He was admitted to Whipps Cross Hospital on July 10, 1957, complaining of severe tremor. His liver was greatly enlarged, and, whilst the clinical picture suggested hepatic failure, liver function tests were within normal limits. E.S.R. 21 mm./hr. His liver was said to have been large since an attack of amoebic hepatitis in 1940. His alcohol consumption was apparently modest. He was discharged after five days as he felt better and wished to continue his holiday.

He was readmitted on November 15, 1957, complaining of backache and pain in the left hip of two months' duration. He had lost 24 lb. (10.9 kg.) in weight and was now very ill. He ran an irregular partially remittent fever with frequent rigors. The liver was enlarged as before. There was considerable oedema of both legs and marked wasting of the left quadriceps and hamstring muscles. A week after admission the left lower limb became completely paralysed and anaesthetic. *X*-ray of the lumbar spine showed destruction of the anterior parts of the bodies of the fourth and fifth lumbar vertebrae. Chest *x*-ray clear. Hb 102%, W.B.C. 10,000 (polymorphs 92%), E.S.R. 76 mm./hr. Stool and blood cultures yielded *S. typhi* (phage type G) and the Widal reaction was positive in the following titres: H 1/15,000, O 1/1,250, Vi 1/80. Lumbar puncture disclosed normal C.S.F. under normal pressure.

On November 29 he was put on chloramphenicol 4 g. daily reducing to 2 g. daily on the third day. A week later a non-pulsatile fluctuant mass appeared in the left iliac fossa. Blood aspirated from the mass proved to be heavily contaminated with *S. typhi*. The patient had now become very anaemic and slightly jaundiced (Hb 41%, W.B.C. 16,000, polymorphs 82%). He died three days later.

Post-mortem examination disclosed typhoid osteomyelitis of the fourth and fifth lumbar vertebrae with perforation of the adjacent abdominal aorta and formation of a large pseudo-aneurysm in the left iliac fossa. The liver was cirrhotic, the remaining abnormalities being a chronic septic spleen and the presence of minute platelet thrombi on the mitral valve.

In that in our patient rupture of the aorta appeared to be secondary to osteomyelitis of the spine our case more closely resembles the first of two published in your columns by Talbot and Hunt.[1] Their article appeared a few days before our patient's second admission to Whipps Cross Hospital and it unfortunately escaped our notice at the time.—We are, etc.,

Whipps Cross Hospital, London E.11. J. T. WRIGHT.
C. RAEBURN.

REFERENCE

[1] Talbot, J. M., and Hunt, J. A., *Brit. med. J.*, 1957, **2**, 1095.

Vaccination Against Smallpox

SIR,—May I make one or two comments in connexion with smallpox vaccination? (1) It can be a dangerous practice to expel lymph from the capillary tube on to the skin by blowing with one's mouth. I have seen a severe accidental vaccination on the buccal mucosa of the lips which produced serious oedema of the glottis. (2) The handling of the broken tubes of lymph should be circumspect. I have seen multiple accidental vaccinations on the fingers of the nurse following a vaccination session.

In both these cases, of course, the accidental vaccination was in a person not highly protected in the proper manner.—I am, etc.,

County Hall, Newport, I.o.W. JOHN MILLS.

SIR,—Numerous recent requests for vaccination have led to the use of a vaccination technique I learnt from my battalion medical sergeant. As this results in a considerable economy of vaccine its publication may be of use at the present time.

A staff of four, including two doctors, is the optimum: (1) An ink ring the size of a sixpence is made on the region selected. (2) First doctor squeezes the minimum visible quantity of vaccine into the centre of this from a "single-dose" tube. (3) Second doctor performs vaccination in the usual way. (4) A dressing is applied.

With care a "single-dose" tube will prove adequate for 15–20 vaccinations. Results so far have shown a 60–90% "take" in all vaccinations.

Using four operators in this way we have found it possible to vaccinate 150 patients per hour.—I am, etc.,

Brecon. A. J. M. CAVENAGH.

SIR,—I find that, given adequate control of lymph flow, one should be able to average 10 patients per single-dose tube. I have done 21 (20 successful), and have no doubt this number could be easily exceeded. I believe the method has already been described, but for any doctor who has not met it before it is as follows:

The teat should be removed from a dropper and the open end closed tightly by tying with thread. A hole