ACUTE HAEMORRHAGIC PANCREATITIS WITH
TUBERCULOUS DISEASE OF PANCREAS.

BY

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TUBERCULOSIS of the pancreas, appearing either in the miliary form or as a tuberculoma, is an uncommon *post-mortem* finding, and in cases such as the following, where a tuberculous process produced an acute haemorrhagic pancreatitis, a very unusual condition is encountered.

Clinical History.—A male patient, aged 66, was admitted to Dr. Douglas Russell's wards at the Victoria Infirmary, Glasgow, on July 22nd, 1928, deeply cyanosed and collapsed. Until the age of 42 he was stated to have been a normally healthy man, but at that time he had an illness, the nature of which we could not discover, which subsequently left him in indifferent health. Two and a half years ago he had broncho-pneumonia, became still more debilitated, and for five days before admission he had been unable to move through weakness and breathlessness. During the month prior to his he complained of flatulent distension and "stomach" pain, and his colour showed progressive cyanosis.

Condition on Admission.—On admission he was pale and cyanosed, the bluish coloration, of rather a striking character, extending over the whole body. His breathing was very laboured and rapid, and suggested pneumonia; the temperature was 99.4° F., respirations 32. The right side moved more freely; on percussion the left side was hyper-resonant over the front, and respiratory murmur was very harsh, with prolongation of the expiratory phase. The abdomen was distended, but not tense, and there appeared to be no tenderness.

No improvement in the patient's condition occurred, and he died two days after admission.

Post-mortem Examination.

The heart was of normal size, with pale muscle and atheromatous coronary vessels. The valves were healthy and competent.

The left lung was firmly adherent at the apex, and was studded with tuberculous nodules. Surrounded by fibrosed lung tissue and at the apex there was a small cavity of about the size of a walnut. The right lung was free, but similarly invaded, and there was some pneumonic consolidation at the base. The pleurae and pericardium contained some excess of fluid.

The liver, which was adherent to the diaphragm, was bluish-black on the surface, and on section was firm, and suggested cirrhosis. A cholesterol stone was found in the gall-bladder; no calculi were seen in the common bile duct or at the ampulla of Vater.

The spleen was much enlarged, and showed a similar dark pigmentation.

The pancreas was generally congested and firm; the head was much increased in size, rather difficult to remove from its blood-stained surroundings, and a section showed a large area of haemorrhage, approximately 2 inches by 1/2 inch, extending into the body of the organ and with smaller areas of necrosis surrounding it.

The suprarenals were enlarged, the medulla being rather soft and showing some cavitation.

The peritoneum contained some blood-stained fluid, and the omentum was soft and felt greasy, and some definite areas of fat necrosis were noted.

The examination of the other organs revealed nothing of any importance.

Microscopic Examination.—The lungs showed areas of catarrhal pneumonia, caseation, and occasional tuberculous giant cells. The spleen showed some caseous foci with definite tubercles and an extreme degree of congestion. The liver showed generally a fine cirrhosis, with some definite tubercles. Tuberculous invasion of the medulla was noted in the left suprarenal, and lymphocytic areas were common. The pancreas, sectioned at various levels, showed areas of necrosis surrounded by inflammatory cells, and in places extensive haemorrhages. Giant cells were occasionally found on the edge of a caseous area, and the vessels of the organ were generally thickened; sometimes this appeared to be confined to the intima, at others the entire vessel wall was affected.

COMMENT.

The pathology of acute haemorrhagic pancreatitis is not yet satisfactorily explained. The frequency of its association with gall-stones and with stones lodged near the ampulla of Vater suggests that the immediate causation is the entrance of bile into the pancreatic duct. Experimentally this has been proved to cause necrosis of the pancreatic tissue, and the injection of a variety of chemical irritants—zinc chloride, papain, artificial gastric juice—has been followed by lesions very similar to those present in subjects dying of haemorrhagic pancreatitis. In this particular case a gall-stone was present in the gall-bladder,

and no other stone was found in the pancreas or the ducts; certainly a minute stone may have been missed, but the definite tuberculous lesion of the pancreas, the thickening of many of the vessels, suggests rather that the cause of the haemorrhage and necrosis could not be referred to the entrance of bile into the duct of Wirsung, but rather to erosion of a vessel or vessels by the tuberculous process.

The early occurrence of death in this disease is likewise not very clear. Some authorities believe that this is due to pressure on the solar plexus, and inflammatory changes in the sympathetic ganglia have been described. Others refer the rapidity of the fatal symptoms to absorption of protein derivatives due to the action of pancreatic juices on its own necrosed tissue. The latter view has some experimental support, and the characteristic cyanosis tends to confirm a biochemical change of some nature. It is more than probable that both factors are of importance.

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CARDIAC DISEASE AMONG SOUTH AFRICAN
NON-EUROPEANS.

(PRELIMINARY NOTE.)

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THIS investigation was suggested by the following quotation from *Rheumatic Heart Disease* by Dr. Carey Coombs: "The disease (pancarditis) due to rheumatism is rare among natives of China and India. I have never heard of the disease among the natives of Africa."

I have analysed the notes of the non-European patients of the Johannesburg General Hospital with the able help of my house-physician, Dr. S. C. Heyman, and with the kind permission of my colleagues on the staff. Dr. Strachan of the South African Institute of Medical Research has acted with me, and has checked from *post-mortem* records the accounts of the patients who died. Although the cases are few in number, they serve as a useful guide for future investigation. From these records we have excluded all patients of Asiatic origin as they have no place in the subject under consideration. About one-fifth of the total cases are of mixed stock (Eurafrikan). In the Kaffirs, it must be remembered, we are dealing with a people in whom the way of life differs from that of Europeans. The Kaffir, however, has been in direct contact with European civilization for a number of years, and his mode of life has accordingly changed. What effect the change has had in the incidence of cardiac disease among this people it is impossible to say.

In this article we are writing in the main of the native who works in towns. As a rule the latter portion of his life is spent in his kraal, and there he dies, so that we are dealing principally with the Kaffir between the ages of 16 and 50. Such an individual spends half his life working in the towns and half at his kraal or home, where he tills the soil, shepherds his flock, or builds his dwelling. In the town his occupation is domestic, shop, or mine labour; it is never sedentary. In this short survey we have had to neglect the occupational factor, since mine labourers in active occupation are restricted to the mine hospitals and do not come into our hospital; and, for the reason mentioned already, Kaffirs are not often admitted for diseases of old age. On the other hand, our sick are drawn from a wide area, though the majority are of local origin at the time of invalidism.

Our analysis dates from March, 1924, to March, 1928. The cases included are all those of which we were reasonably sure of the diagnosis. Note-taking is difficult in the