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JEJUNAL ULCER ASSOCIATED WITH TESTICULAR PAIN.

BY

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THE following case appears to be worth recording on account of the unusual symptoms.

A man, aged 37, had mumps as a child, but otherwise no illness worthy of note till December, 1915, when he was invalided from the army with dysentery. Shortly after returning to duty he was buried by a shell. He was apparently concussed, and immediately afterwards the thyroid gland was seen to be much enlarged; it gradually became smaller, and now seems to be normal. Shortly after the concussion he began to have attacks of epigastric pain, associated with hunger, about half an hour after meals, and tenderness in the epigastrium to the right of the mid-line. At this time he was having irregular meals and smoked heavily; the pain was relieved by food for about half an hour, and then returned increased, being frequently associated with vomiting. At the beginning the attacks lasted about a week, pain appearing after every meal during this time; there were intervals of two or three months during which he was entirely free from symptoms. The attacks were specially severe during the winter, and were usually accompanied by enlargement of the thyroid gland. They gradually became more frequent and of longer duration.

In July, 1919, he had an attack of unusual severity, and three weeks later, while working in his office, he experienced sudden acute abdominal pain associated with repeated vomiting. An operation was performed for perforated duodenal ulcer, but he was apparently given no instructions as to diet, and he ate what he pleased. He remained well for about two years, after which the symptoms appeared again more acutely, and the pain and tenderness extended across the epigastrium. The stools now showed the presence of occult blood. He was treated for six weeks by dieting, but was not confined to bed. After a short interval the symptoms returned, and in February, 1925, gastro-jejunostomy was performed; following this, he was put on a moderately restricted diet for two months.

Six months later he again had symptoms, but they were not so acute as before the operation; they came on particularly when the weather was cold. The pain became gradually longer in duration, increasing in intensity during the day, independent of meals, and was not now relieved by food. On the other hand, for the first time he started to be wakened by pain between 2 and 3 a.m. This only occurred if he had taken a meal after 7 p.m.

In August, 1926, he first felt a dull aching pain in the testes at the end of the day, when the epigastric pain was most acute. A suspensory bandage gave little, if any, relief. Gradually the pain in the testes became greater, and appeared earlier in the day, together with pain in the loins. He never had these symptoms except when the epigastric pain was present, and there was no abnormality in micturition.

In May, 1928, he was awakened about 3 a.m. by attacks of pain in the testes, so severe as to necessitate injections of morphine. There was general tenderness in the upper abdomen, especially at a point immediately above and to the left of the umbilicus, where a small lump could be felt. It seemed to be fixed to the deeper tissues, and moved with the pulsations of the aorta. Pressure on the lump reproduced the pain in the back and in the testes. The testes themselves were tender, and there was slight hyperalgesia in the loins. The urine was normal, and examination of the urogenital tract revealed no abnormality. An x-ray examination with a barium meal showed a jejunal ulcer in the situation of the tumour. Occult blood was present in the stools. The patient was confined to bed, and treated medically on a strict diet. The pain was rapidly relieved and the tumour gradually disappeared. Since then he has remained on a modified diet, and has become a non-smoker. He has remained free from symptoms, has put on 2 st. in weight, and remarks that he has never felt better in his life.

The two main points of interest in this case are: the association of thyroid enlargement with attacks of epigastric discomfort due to duodenal ulcer, and the pain in the testes and the loins. With regard to this pain, four points may be emphasized. (1) Testicular pain was never

present except when there was pain in the epigastrium. (2) Pressure on the tumour produced pain in the testes. (3) Subsidence of the pain, both in the testes and in the epigastrium, coincided with the disappearance of the tumour. (4) The tumour moved with the pulsations of the aorta, to which it appeared to be fixed. The first three of these points suggest that both testicular and epigastric pain had a common origin.

X-ray examination showed that the jejunal ulcer and the tumour were situated just to the left of the mid-line, at the level of the intervertebral disc between the third and fourth lumbar vertebrae. The sympathetic nerve supply, both of the kidneys and the testes, is derived from the twelfth thoracic and first lumbar segments of the cord. These nerves form a plexus in front of the aorta, and branches from this plexus accompany the renal arteries to the kidneys. Branches from the same plexus accompany the spermatic vessels to the testes, and are also distributed to the ureters. Thus the inflammatory mass associated with the ulcer was situated where the sympathetic plexus, in front of the aorta, would be involved, and the patient's symptoms suggest that pain can be referred to a viscus through sympathetic nerves. The phenomenon also suggests an explanation for the testicular pain in ureteric colic, other than the one advanced by Mackenzie, that both these structures are supplied by branches of the genito-crural nerve.

Periodic stimulation of the sympathetic plexus by the inflammatory mass might be due to periodic vascular engorgement or to actual traction on the plexus. The latter seems the more likely explanation. The traction could be produced by gastric movement, the site of the ulcer being fixed. If this explanation is correct, the coincidence of the epigastric pain with that in the testes suggests that pain due to an ulcer is associated with movement of the diseased viscus, whether the movement be tonic or peristaltic in origin. The persistent character of the pain suggests an alteration in tone as the more likely explanation.

TRAUMATIC FAT NECROSIS OF THE BREAST.

BY

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THE condition of traumatic fat necrosis of the breast was first described in America in 1920 by Lee and Adair,¹ who published two cases. They wrote further on the subject in 1922² and in 1924,³ and since then several cases have been described. The first published in this country was by Keynes.⁴ Later, Hadfield⁵ wrote on the subject.

In these cases, following trauma, there developed in the breast a lump which clinically appeared to be a carcinoma, but on microscopic examination areas of fat necrosis only were found, and no evidence of malignant disease was present. Farr⁶ was able to produce experimentally the characteristic lesions by pinching with forceps the subcutaneous fat of young pigs. Sections of the injured areas showed the typical histological picture of fat necrosis. Farr concluded that in an area of traumatized fat the lipolytic enzyme present in fat and blood is liberated, and acts on the neutral fat, breaking it down into its component parts—fatty acid and glycerol. These substances form the irritant which gives rise to the foreign body reaction producing the lesions of traumatic fat necrosis. Although trauma seems to be the usual factor in the published cases, Gottesman and Zemansky⁷ came across a case in which this cause could be eliminated. Further, they analysed 78 cases of non-malignant breasts, and in 14 found some stage or degree of fat necrosis. They concluded that factors other than trauma may explain the phenomenon, and that the escape of fatty material from a dilated duct and its subsequent decomposition plays a role in the cause of this condition.

Professor M. J. Stewart calls the condition subacute panniculitis. He tells me that in his experience it is not uncommon, and he has met with it in the omentum,