PERFORATION OF A MECKEL'S DIVERTICULUM CAUSED BY AN IRON NAIL (A Case Report)

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Introduction

Meckel's diverticulum is the most common congenital anomaly of the gastrointestinal tract. It often remains asymptomatic for life. Eight to twenty two per cent of the patients found to have Meckel's diverticulum present with its complications [1]. The common complications of Meckel's diverticulum are intestinal obstruction, inflammation and haemorrhage [1]. Perforation of a Meckel's diverticulum by a foreign body is rare. We report here one such case which illustrates that foreign body perforation of a Meckel's diverticulum may present as acute right iliac fossa pain.

Case Report

A previously healthy 20-year-old soldier presented with severe right lower abdominal pain of 4 hours duration. On examination his temperature was 100°F and pulse rate was 96/minute. There was marked tenderness, rigidity and rebound tenderness in the right iliac fossa. The total leucocyte count was 12000/cumm with 75 per cent polymorphs. Urine analysis was normal. A provisional diagnosis of acute appendicitis was made and the patient taken up for emergency surgery. The abdomen was opened by a Lanz incision. There was a moderate amount of pus in the peritoneal cavity. The appendix was normal. A Meckel's diverticulum measuring 7 cm in length was present about 25 cm from the ileocecal junction. The diverticulum was edematous, indurated and full of pus. There was a sharp iron nail projecting out of the Meckel's diverticulum perforating it at the tip (Fig 1). A 5 cm segment of ileum including the diverticulum was resected. Post-operative recovery was uneventful. Histopathological examination of the resected specimen showed acute inflammatory changes.

Discussion

Less than 1 per cent of ingested foreign bodies perforate the gastrointestinal tract and those that do are usually large (greater than 6.5 cm) or sharp

objects [2]. Perforation of a Meckel's diverticulum by a foreign body is rare and only 42 cases have been previously reported [3]. The objects responsible in these 42 cases were fish bones in 23 cases, wood-splinters in 6 cases, needles or pins in 4 cases, a rolled tomato skin in 2 cases and such diverse items like a prune pit, a grape seed, a chicken bone, a cabbage stalk, metallic costume jewellery and a tooth brush bristle in 1 case each. Perforation of a Meckel's diverticulum by an alkaline hearing-aid battery [3] and a coin [4] have also been reported. Impaction of foreign bodies in a Meckel's diverticulum e.g. coins [5], fish bones, gallstones, marbles and bullets [6] have been described. It has been suggested that perforation of a Meckel's diverticulum by a sharp pointed object may be due to peristaltic pressure, while perforation by a smooth object could be due to the result of inflammation and ulceration secondary to pressure on the diverticular wall [3].

Fig. 1 :

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Perforation of a Meckel's diverticulum frequently presents with signs and symptoms indistinguishable from acute appendicitis [1]. This was so in our patient. Moses has stated that unless there is a history of melaena, it will be impossible to differentiate the condition from appendicitis with perforation [6].

This case illustrates that foreign body perforation of a Meckel's diverticulum may present as acute right iliac fossa pain. Surprisingly this patient did not remember having ingested a nail. The nail may have remained silent for a variable period before it perforated the Meckel's diverticulum. To the best of our knowledge perforation of a Meckel's diverticulum by an iron nail has not been reported earlier.

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