MECKEL'S DIVERTICULUM AS A CAUSE OF ILEO-ILEAL INTUSSUSCEPTION

(A Case Report)

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Introduction

While almost every student of medicine is familiar with Meckel's diverticulum and its various complications, intussusception secondary to a diverticulum is rarely encountered in clinical practice. We report a case which is classical in its presentation and management, and append comments on newer trends on diagnosis and treatment.

Case Report

A 5-month-old male infant presented with pyrexia, poor feeding, vomiting, abdominal distension and rectal haemorrhage of a day's duration. There was no history of change in dietary constituents or of respiratory infection. Clinically he was listless, pale and had tachycardia. There was abdominal distension and dilated coils of intestines were visible. No lump was palpable. Rectal examination revealed blood on the glove. A clinical diagnosis of intussusception was made.

Radiographs and an abdominal ultrasound scan showed diffuse jejunal and ileal distension. A 99m technetium radioisotope scan showed an area of increased isotope uptake in the right hypochondrium, highly suggestive of a Meckel's diverticulum (Fig 1).

He was subjected to an exploratory laparotomy by a right lower transverse incision. Apart from haemorrhagic ascites, he had a Meckel's diverticulum about 45 cm proximal to the ileocaecal junction and about 5 cm long which had intussuscepted over 20 cm of ileum. This segment was resected and a standard four layer end to end anastomosis performed. Post-operatively, oral feeding and normal bowel activity were restored on the third and fourth day respectively. At a review three months later, he was asymptomatic and thriving.

Discussion

A congenital diverticulum possessing all three coats of the intestinal wall and its own blood supply, the Meckel's diverticulum is present on the antimesenteric border of the lower ileum, about 60 cm from the ileocaecal junction in about 2 per cent of people. It is on an average, 5 cm long. Though the frequency is equal in males, and females the former are more prone to

develop complications. In 20 per cent of cases, the mucosa may contain gastric, colonic or pancreatic heterotrophic epithelium.

The diverticulum is prone to a host of complications which include haemorrhage, intussusception, diverticulitis, peptic ulcerations and intestinal obstruction. Four to thirty per cent of diverticula are symptomatic and of these, only five to ten per cent present with intussusception [1]. Merely two per cent of all intussusceptions are due to a Meckel's diverticulum [2]. The clinical presentation depends upon the exact

Fig. 1 : A 99m Technetium radioisotope scan showing increased activity over the diverticulum as a 'dark spot' near the right hypochondrium and also over the stomach.

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nature of complication. This child presented with pain, vomiting and rectal bleeding and there was no abdominal mass. The clinical triad of vomiting, abdominal colics and blood in the stools may occur in as little as one third of cases.

The diagnosis of the diverticulum or its complications is largely clinical. A symptomatic diverticulum is usually not visualised on barium studies. Moreover the diagnosis by enteroclysis or imaging studies can conflict with the need for timely surgical intervention. Nevertheless, the presence of a solitary mottled polypoidal lesion at the site of a small bowel obstruction may be a valuable pointer in a plain film [3]. A polypoidal filling defect may be seen on barium films when invagination has occurred [4]. Newer imaging modalities are supportive as well. A double target sign in ultrasound scans [5], demonstration by CT [6], or by 99m technetium isotope scans [7] may be useful.

A barium enema reduction may be successful in reducing intussusception in as high as 50-80 per cent of cases [1]. The success rate of reduction has been reported to be highest in patients between 9 and 16 months of age (83%) and falls after 24 hours since onset of illness. Hence it may be tried in early cases and in the absence of peritonitis. A long duration of illness, positive clinical triad, a positive pathological lead point and radiological findings of bowel obstruction have been identified as risk factors leading patients to surgery [1]. Barium reduction was not attempted in this case as the patient had most of the risk factors enumerated. He had features of intestinal obstruction with septicaemia and hence was taken up for surgery. On laparotomy, as he had a non viable section of intestine, this was resected.

At surgery, the specific operation depends upon the anatomy of the diverticulum, the degree of involvement of the intestinal wall and the nature of the complication. Hence early diagnosis and early surgery significantly limit morbidity. Of late, laparoscopically assisted resection of the diverticulum has been reported [8].

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