



A CASE REPORT ON INTERNAL HERNIA AS AN UNUSUAL CAUSE OF SMALL BOWEL OBSTRUCTION

General Surgery

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ABSTRACT

Internal hernia is one of the rare causes of small bowel obstruction. A congenital mesenteric defect is very rare, but can potentially cause internal hernia with consequent incarceration or strangulation of the small intestine. In this case report, we describe our experience treating a paediatric patient who presented with symptoms of acute small bowel obstruction and was later diagnosed with internal hernia during surgical procedure. Loops of small intestine had gone through the defect three times in a complex manner and strangulated. Gangrenous intestine was resected and a primary anastomosis was performed. The purpose of this case report is to demonstrate that congenital mesenteric defects are usually diagnosed late or incidentally. Although they are uncommon, they are far more likely to cause bowel obstruction and strangulation. Immediate surgical intervention is required following the diagnosis.

KEYWORDS

surgical repair, xray, acute small bowel obstruction, paraduodenal hernia, internal hernia

INTRODUCTION

An uncommon etiology of intestinal obstruction is attributable to internal hernia, representing an incidence of approximately 0.6-5.8%. Internal hernia is one of the rare causes of small bowel obstruction. It is reported that 0.2-0.9% of patients of small bowel obstruction have internal hernia. A transmesenteric hernia is an unusual type of internal hernia. Transmesenteric hernia occurs more frequently after previous surgery in which mesentrium has been incised but not closed after gastro-intestinal reconstruction. On the other hand, a congenital mesenteric defect is very rare but can potentially cause internal hernia with consequent incarceration or strangulation of the small intestine. Congenital mesenteric defects causing internal hernia have been mostly reported in infants and children, and can become a cause of unexpected death.

CASE REPORT

A 3 years old girl presented in the Emergency Room with the complaint of abdominal pain for last 2 days which was associated with multiple episodes of bilious vomiting and unable to flatus and motion for last 1 day.

CLINICAL PROGRESSION

The patient experienced intermittent crampy abdominal pain, accompanied by episodes of vomiting and abdominal distension. Upon physical examination, generalized discomfort was noted, without palpable mass or signs indicative of peritoneal irritation. Subsequently, the patient underwent an erect abdominal radiograph and an abdominal ultrasound.

Diagnostic Evaluation

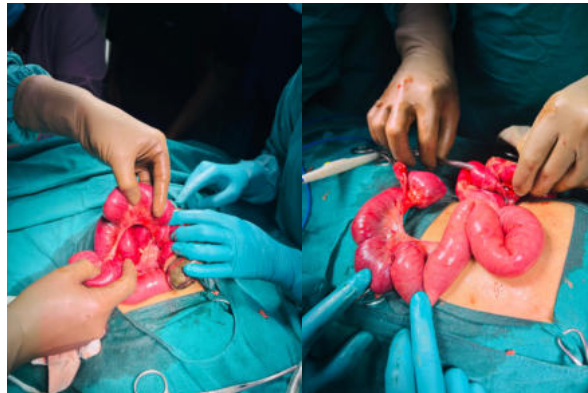
The erect abdominal radiograph revealed abnormal air-fluid levels in the mid abdomen, along with dilated small bowel loops, suggesting the presence of small bowel obstruction. The abdominal ultrasound showed dilated small bowel loops in the central abdomen, without any discernible transition point or mass.



INTERVENTION AND OUTCOME

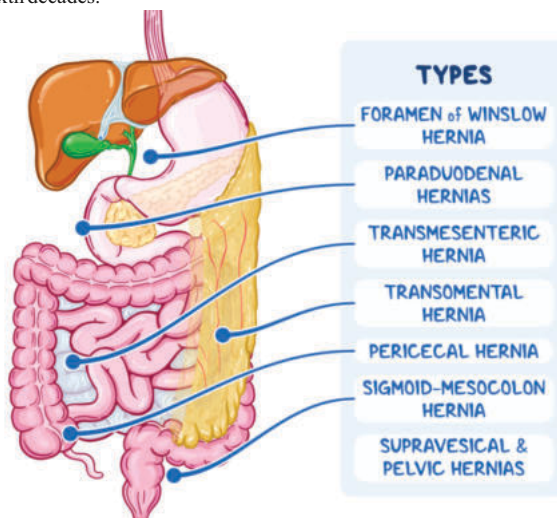
The patient underwent exploratory laparotomy with transverse supraumbilical incision under GA. Approx 15cms of Gangrenous bowel was identified, twisted and herniating through the transmesenteric defect. The defect was surrounded by a fibrous band which caused the gangrene of the twisted bowel loop. Resection and

Anastomosis followed by Nobles plication of the mesentery was done. Post Op period was uneventful.



CONCLUSION

An internal hernia is characterized by protrusion into peritoneal pouches or apertures, differing from hernias resulting from abnormalities in the abdominal walls. The presence of a sac containing an abdominal organ, whether acquired or congenital, defines the occurrence of internal hernias. While hernia symptoms may manifest at any age, they are less frequent in the initial two decades of life, with the median diagnostic age typically falling between the fourth and sixth decades.



The causes of forming mesentery defect still remain uncertain. A few hypotheses have been reported, such as regression of the dorsal

mesentery, developmental enlargement of a hypovascular area, the rapid lengthening of a segment of mesentery and compression of the mesentery by the colon during fetal mid-gut herniation into the yolk sac. It is also reported that congenital mesenteric defect is often associated with other anomalies of the gastro-intestinal tract, especially small bowel atresia. Surgical decision-making is on the basis of clinical findings of intestinal strangulation or ischemia, and emergency laparotomy should be performed without preoperative diagnosis of such a rare disease. When mesenteric defect is incidentally detected during unrelated abdominal surgery, the defect should be closed to prevent it from causing internal hernia in future.

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