Paraduodenal hernia presenting as acute intestinal obstruction on computed tomography scan

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CASE REPORT

A 24-year-old male presented with a four-year history of intermittent colicky abdominal pain. These episodes were associated with abdominal distension and constipation and had previously resolved spontaneously. Over the four-year period a series of investigation were performed by his general practitioner, including baseline blood tests, serology for coeliac disease, Esophagogastroduodenoscopy (OGD) and colonoscopy. All investigations were normal. He had undergone an appendectomy for appendicitis.

He presented acutely to hospital with symptoms and signs suggestive of mechanical bowel obstruction. Abdominal X-ray (AXR) and computed tomography (CT) scan were performed and they showed a cluster of abnormally dilated small bowel loops (Figures 1 and 2), with a mass effect on the ascending colon. The configuration of bowel loops seen on imaging suggested a closed loop obstruction secondary to an internal hernia.

The patient proceeded to theatre for a laparotomy, findings at laparotomy were acute small bowel obstruction secondary to a right sided paraduodenal hernia. This was repaired and the patient recovered well.

Figure 1: A supine abdominal X-ray demonstrates a mass-like cluster of abnormally dilated small bowel loops in the upper abdomen extending across to the right side of the abdomen and compressing the ascending colon.

Figure 2: Enhanced abdominal CT scan reconstructed in the coronal plane. This demonstrates the obstructed small bowel loops and better depicts the compressive effect on the ascending colon. The point of conversion of the bowel loops close to the midline approximates to the site of herniation through Waldeyer’s fossa.

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DISCUSSION

Paraduodenal hernias are rare congenital anomaly arising from an error of midgut rotation. They are said to be the most common type of internal hernia. Both right and left paraduodenal hernias occur [1]. Right paraduodenal hernias occur when bowel herniates through Waldayer’s fossa (a defect in the jejunal mesentry) [2]. Left paraduodenal hernias can be considered truly congenital and occur when bowel prolapses through Landzert fossa, an aperture behind the fourth part of the duodenum.

Signs and symptoms are variable. Intermittent episodes of self-limiting bowel obstruction may be associated with chronically incarcerated hernias. As in this case the patient had intermittent episodes of abdominal pain and distension. Complications of internal hernias include small bowel obstruction, ischemia, infarction and perforation. Differential diagnoses of internal hernias include foreign body impaction, intestinal volvulus, adhesions and tumor [3]. The treatment of a paraduodenal hernia is prompt surgical repair.

CONCLUSION

Internal hernias are rare and can be a cause of recurrent episodes of abdominal symptoms. Critical review of imaging is needed to diagnose internal hernias. Prompt treatment by surgical repair is required to prevent complications of acute small bowel obstruction and the halt further recurrence of symptomatic episodes.

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David Scullion – Analysis and interpretation of data, Critical revision of the article, Final approval of the version to be published

Guarantor

The corresponding author is the guarantor of submission.

Conflict of Interest

Authors declare no conflict of interest.

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