Obstructed hepatic flexure contained in a right-sided inguinoscrotal hernia resulting in caecal perforation

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ABSTRACT

Inguinal hernia often presents as an emergency with obstruction and subsequent strangulation. We report a unique case where an inguinoscrotal sliding type hernia contained the entire hepatic flexure as its lead point, resulting in acute colonic obstruction and caecal wall perforation.

KEYWORDS

Inguinal hernia – Sliding hernia – Obstruction – Perforation

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Inguinal hernia is one of the recognised dynamic, extramural causes of intestinal obstruction, where peristalsis works against a physical barrier. Initially, proximal peristalsis increases to overcome the obstruction. When the obstruction is not relieved, the proximal segment dilates, causing reduction in peristaltic strength, resulting in flaccidity and paralysis. Further proximal distension results from gas and fluid accumulation. In the setting of complete obstruction, perforation from back pressure on the proximal segment is inevitable with time. We report a case of an inguinoscrotal sliding type hernia with the hepatic flexure of the colon and omentum as its lead point, resulting in acute colonic obstruction and caecal wall ‘pistol shot’ perforation.

Case history

A 63-year-old man with a history of chronic obstructive pulmonary disease, hypertension and ischaemic heart disease presented with a 3-day history of abdominal distension and vomiting, with absolute constipation for 5 days. He had had no previous abdominal surgery. A non-tender large irreducible right-sided inguinoscrotal hernia was found, with concomitant tenderness in the left iliac fossa. Demonstrating tachycardia, tachypnoea and hypotension, he received fluid resuscitation, and was investigated further with plain abdominal radiography and rigid sigmoidoscopy. The radiography found acute colonic distension (Fig 1). The rigid sigmoidoscope was inserted to 18cm from the anal verge. This did not demonstrate a cut-off point, therefore making diagnosis of sigmoid volvulus unlikely.

Figure 1 Abdominal radiography at presentation

Figure 2 Illustration of operative findings

The patient proceeded to emergency theatre with the working diagnosis of an inguinoscrotal hernia causing intestinal obstruction. A midline laparotomy was the incision of choice. It was found that the hepatic flexure, on an abnormally long mesentery, formed the lead point of an inguinoscrotal hernia, bringing with it the greater omentum, distal ascending and proximal transverse colon (Fig 2).

In total, 20cm of colon was involved in the hernia, causing intestinal obstruction and rotation of the remaining abdominal contents. As a result, the caecum was found in the left iliac fossa, with the stomach extending across to the right flank, drawn across by the abnormally placed greater omentum and transverse colon. An ischaemic serosal tear and single ‘pistol shot’ perforation was found in the wall of the dilated caecum, with minimal surrounding contamination. The perforation was controlled using a single 2/0 polyglactin suture, and the hernia was reduced by way of gentle traction and external pressure, separating the omentum and colon from the right spermatic cord, returning the testicle to the scrotum.

A right hemicolectomy with side-to-side stapled anastomosis was performed. Due to localised contamination, no attempt was made to perform a mesh repair of the hernial defect. The significantly dilated deep inguinal ring was closed partially by way of a purse string 2/0 polypropylene suture to the peritoneum. The abdomen was washed out with warmed saline and closed with a temporary passive drain left in situ for 48 hours.

Intravenous antibiotics continued for a total of five days and the patient was managed in the surgical high dependency unit with an epidural catheter providing analgesia. Tachycardia persisted postoperatively. Computed tomography (CT) of the abdomen and pelvis was performed on the fourth postoperative day. This demonstrated generalised postoperative inflammatory changes in keeping with recent surgery and an intact anastomosis. He continued to settle and was discharged on the eighth postoperative day without complication.

Discussion

Acute presentation of an inguinal hernia with or without symptoms and signs of intestinal obstruction is common in emergency general surgical practice. As this patient presented with abdominal tenderness, vomiting, a hernia and absolute constipation, consideration was given to all possible causes. The differential diagnoses included sigmoid volvulus, diverticulitis, obstructed or strangulated hernia and neoplastic colonic obstruction.

Unexpected findings in inguinal hernias have been discussed in the published literature. Contents of the hernia sac such as neoplastic colonic obstruction,¹ obstructed colon,² perforated colonic diverticulum³ and diverticulitis⁴ have all been reported to date. However, such a presentation of the entire hepatic flexure in an inguinal hernia has not been described previously.

The on-call consultant radiologist was asked to explore the abdominal radiography findings (Fig 1) and discuss the potential benefits of further imaging. A double contrast instant enema was considered because the hernia itself was not tender to palpation and therefore not clinically in keeping with strangulation. In retrospect, an instant enema in this case may have been misleading since the distorted anatomy could have been misinterpreted as excluding a volvulus or other colonic obstruction. CT of the abdomen and pelvis may have provided more information but this process would have delayed emergency surgery inappropriately.

Conventional teaching dictates that suspected colonic obstruction and acute abdominal tenderness over the caecum requires an emergency laparotomy for potential caecal ischaemia. In this case, the patient did indeed have caecal ischaemia and required an emergency laparotomy. However, due to the rotated colon and abnormal colonic position, the clinical presentation was more in keeping with pathology involving the sigmoid colon.

This case highlights the consideration that must be given to the surgical incision. When intestinal obstruction is suspected, compromised bowel in the hernia often requires segmental resection. Small or large bowel resection performed via a groin wound is possible but technically difficult. A midline laparotomy wound provides best overall access as it is readily extendible if required. This case also presented an extremely rare variant of the complete inguinoscrotal hernia as it involved the omentum and hepatic flexure as the sliding component lead point. As a result of slipping of the posterior parietal peritoneum on the underlying retroperitoneal structures, the posterior wall of

the hernial sac is not formed by peritoneum alone but by the sigmoid colon and its mesentery (on the left), the caecum or ascending colon (on the right) and occasionally on either side by the bladder.⁵ This is the textbook definition of a sliding hernia, termed ‘hernia-en-glissade’.

Conclusions

This unusual case presented an extremely rare variant of the complete inguinoscrotal sliding type hernia as it involved the hepatic flexure of the colon as the sliding component lead point with involved greater omentum. Acute presentation of an inguinal hernia with intestinal obstruction requires emergency surgery, with careful consideration as to the surgical incision performed, a midline laparotomy being most appropriate. When confronted with a patient who has colonic obstruction and abdominal tenderness, proceeding to an emergency laparotomy is prudent.

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