Case Report

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Interparietal Hernia Presenting as Acute Intestinal Obstruction: A Case Report

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ABSTRACT

Interparietal hernias are a few and infrequent type of abdominal wall hernias where the herniated viscera is located between the musculoaponeurotic layers of the anterior abdominal wall. The hidden anatomic location commonly causes time loss in diagnosis, and the presentation also is commonly complicated by the scenario of intestinal obstruction. The present report discusses a 67-year-old woman who came to the clinic with acute pain and distension in the abdomen, vomiting, and no bowel movements. Contrast enhanced computed tomography showed loops of the small bowel hernias through an inferior midline abdominal wall defect above the pubic symphysis. Emergency exploratory laparotomy was made to establish an interparietal hernia which was located below the arcuate line, and the distal jejunal and ileal loops were incarcerated. It was a viable bowel that was successfully reduced and a mesh repair of the bowel was done to seal the defect. The follow-up postoperative period was complication-free and the patient did not suffer any symptoms. This case emphasizes the significance of the consideration of interparietal hernia in patients with unexplained intestinal obstruction and a history of abdominal surgery, and the significance of computed tomography in the diagnosis of the condition preoperative diagnosis. Diagnosis and treatment are easy on realization.

Keywords: Interparietal hernia, Intestinal obstruction, Abdominal wall hernia, Computed tomography.

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Introduction

Interstitial hernias or interparietal hernias are a subgroup of abdominal wall hernias that are rare and where the hernia sac is not covered by any of the abdominal wall layers but instead lies between them and gets stuck to the subcutaneous.[1] They represent extremely low percentages of ventral hernias, and can often be linked with the history of abdominal surgery, trauma, or a congenitally weak abdominal wall.[2] Due to a frequent lack of the external bulge, the hernias can become clinically silent until they lead to complications including incarceration or intestinal obstruction.[3] Most of the cases reported are of old age patients, slightly female dominated, especially those who have reported a history of gynecological or lower abdominal surgeries.[4] Physical examination is not sufficient in the diagnosis of hernia, and imaging, especially computed tomography (CT) is critically important in localizing the hernia, its contents, and complications.[5] We describe a case of interparietal hernia which presented as acute intestinal obstruction thus demonstrating its resistant nature to diagnosis, radiological profiles, surgery and postoperative prognosis.

Case Presentation

A 67-year-old female has a history of progressive abdominal pain, abdominal distension, bilious vomiting, absolute constipation that is three days old and has appeared in the emergency department. She had no history of fever or GI bleeding and her past medical history of an abdominal hysterectomy done a decade ago by a lower midline incision. No history of abdominal trauma or hernia repair. Upon examination, the patient was observed to be dehydrated and uncomfortable. The vital signs revealed tachycardia (heart rate 108 beats per minute) and almost hypotension. The examination of the abdomen revealed significant distension particularly in the lower abdomen, hyperactivity of bowel movements,

and generalized tenderness. There was no apparent hernia externally or surgical site swellings and no generalized peritonitis was present.

Lab tests such as complete blood count and serum electrolytes were normal. An abdominal radiograph showed several loops of the small bowel which were dilated and had air fluid levels. Abdominal ultrasonography revealed large loops of small bowel but did not show any clear cause of obstruction.

A CT scan of the abdomen and pelvis with contrast showed a 3-cm defect in the lower midline anterior abdominal wall, above the pubic symphysis. The presence of numerous ileal loops between the layers of the abdominal wall was observed, which was also in line with interparietal hernia. Small bowel loops were dilated at the proximal part whereas distal loops were collapsed. No signs of bowel ischemia or perforation were identified.

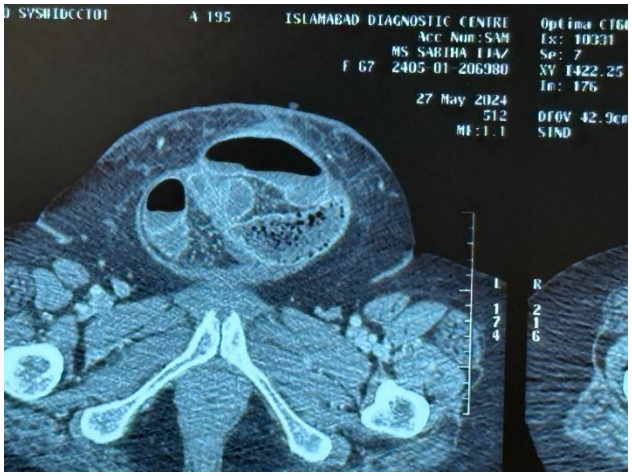

Figure 1. CT abdomen showing interparietal herniation of small bowel loops.

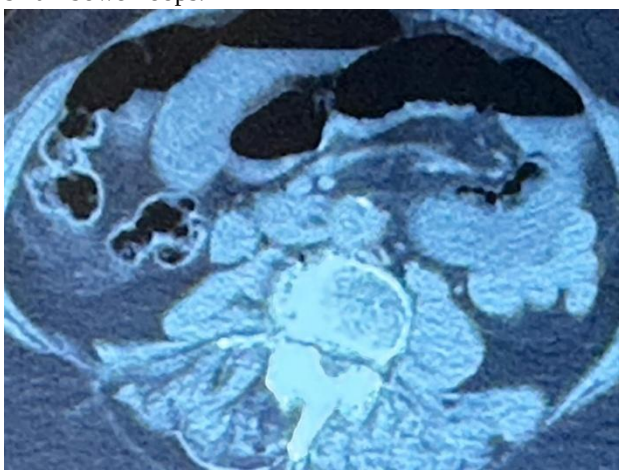

Figure 2. CT abdomen showing interparietal herniation of small bowel loops.

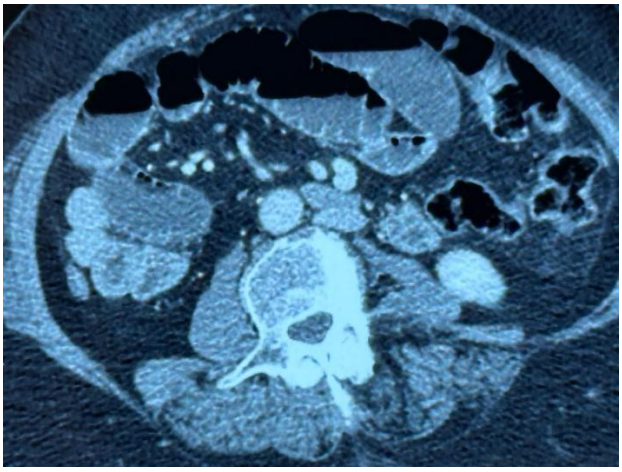

Figure 3. CT abdomen showing interparietal herniation of small bowel loops.

The patient had an emergency laparotomy that was exploratory. During the operation, loops of distal jejunal and ileal were tied up in the rectus sheath below the arcuate line. The bowel was alive and it was gently debrided. The defect of the abdominal wall was also repaired with polypropylene mesh. There was no bowel resection needed.

The patient had an uneventful postoperative recovery. Oral intake was resumed on postoperative day three, and bowel function returned promptly. She was discharged on postoperative day five in stable condition. At follow-up visits at two weeks, three months, and six months, the patient remained asymptomatic with no evidence of wound infection, mesh-related complications, or hernia recurrence.

Discussion

Interparietal hernias are rarely met in clinical practice and are usually diagnosed during surgical exploration.[6] Unlike the more prevalent ventral or incisional hernias, the interparietal hernias are not accompanied by a visible external swelling, making it hard to detect clinically. The vast majority of reported cases are older patients, who previously underwent abdominal surgery, which is why it is possible to conclude that the surgical disruption of the layers of the abdominal wall preconditions the development of hernias.[7] In earlier published studies, most patients were able to display signs of bowel obstruction and not elective hernia complaints.[8] Our case is consistent with current literature regarding patient age, gender, previous surgery, and acute presentation of obstruction. The position of the hernia is below the arcuate line as it matches other descriptions because they

do not support their anterior rectus sheath and anatomically susceptible in this area.[9]

Nevertheless, it has been indicated that the CT imaging can be employed to increase the hernia sac, hernia contents and the precise anatomical plane involved with the preoperative diagnostics significantly.[5] In our case, CT findings were the determining factor, leading to the execution of the surgery without any further notice. The procedure in surgery is generally linked to the excision of the herniated tissue and repair of the defect, mesh reinforcement is proposed to reduce the rate of relapse.[10] When timely intervention is conducted, positive postoperative outcomes during surgery as witnessed in our patient has always been reported.

Conclusion

The differential diagnosis of intestinal obstruction should include interparietal hernia, especially in older patients with a history of previous abdominal surgery and no apparent external hernia. Bowel ischemia can be prevented by early diagnosis using computed tomography and timely surgical repair, which results in high postoperative outcomes. As we have seen in our case, mesh repair is not only safe but also effective, and no recurrence was evidenced in the follow-up.

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