Intestinal obstruction secondary to incarcerated broad ligament hernia: a case report

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Abstract

Introduction
Intestinal obstruction is commonly seen at emergency services but is not usually caused by internal hernias. Herniation through defects of the broad ligament is even rarer. This case report discusses Intestinal obstruction secondary to incarcerated broad ligament hernia.

Case report
A 39-year-old female without surgical or gynaecological antecedents, presented with small bowel obstruction. Radiograph and a computed tomography scan confirmed obstruction but did not provide a cause. On laparotomy, an incarcerated internal hernia through a broad ligament defect was found and liberated. The patient had an uneventful postoperative evolution.

Discussion
The authors give a brief literature review and discuss the importance of considering this aetiology in cases of intestinal obstruction in females without surgical antecedents since diagnosis is often difficult. The necessity of early intervention that prevents severe complications is also emphasised.

Conclusion
Broad ligament hernia is a rare entity that may lead to severe complications. It must be considered as a possible cause of intestinal obstruction in females, and early surgical treatment is mandatory in these cases; it can be carried out through open or laparoscopic approaches.

Introduction
Intestinal obstruction is a common clinical cause for presentation at an emergency service. The occurrence of small bowel obstruction secondary to internal hernias is an infrequent condition1,2. Internal hernias are caused by the herniation of bowel segments through natural or unnatural openings within the peritoneal cavity. They may be acquired or congenital and persistent or intermittent3. Herniation through defects of the broad ligament of the uterus is even rarer3,4. It is a severe condition due to the risk of strangulation and perforation of the hernial content, even in small hernias4. This case report presents a 39-year-old female with intestinal obstruction secondary to an incarcerated internal hernia through a broad ligament defect.

Case report
A 39-year-old nulligravid, nulliparous female was admitted to the Campinas Medical Centre emergency service due to abdominal pain for 24 hours, located in the whole abdomen, with progressively higher intensity accompanied by nausea and vomiting of initially gastrobiliary content and then faecal content. On clinical examination, mild mucosal dehydration and moderate abdominal distension was observed along with intense tenderness on deep palpation, without any peritoneal signs. No changes were found on vaginal and rectal examination. The patient had no important antecedents and had never undergone any abdominal or pelvic surgical procedure. Laboratory studies were normal. Abdominal radiograph showed small-bowel distension accompanied by diffuse multiple hydro-aerial levels. A computed tomography scan revealed great dilation of the small bowel along with a sudden complete obstruction of the terminal ileum

Figure 1: Computed tomography scan showing intestinal obstruction.

Figure 2: Open defect on right broad ligament of the uterus.

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The patient underwent an explorative laparotomy whose findings were important dilatation of the small bowel from the Treitz ligament to the terminal ileum located 20 cm from the ileocaecal valve; an incarcerated herniation of a 10 cm segment of the ileum through a 2 cm defect on the right broad ligament of the uterus (Figure 2) with mild signs of ischemia. The herniation was liberated and the signs of ischemia disappeared. The defect was closed with a simple suture carried out with 3.0 cotton stitches. The patient had an uneventful postoperative evolution and was discharged from the hospital 72 hours after surgery. The patient was followed postoperatively for 60 days without any complaints or complications.

Discussion

Internal hernias represent only 0.4% to 4.1% of all small bowel incarcerations, and of these, the hernias through a defect of the broad ligament represent only 4% to 7%4. The first reported case of an incarcerated hernia through a defect of the broad ligament was observed in 1861 by Quain who found it during autopsy5. Hunt6 classified hernias of the broad ligament into two types: the fenestra type that is caused by a complete fenestration through a defect in the broad ligament and the pouch type, which involves herniation into the pouch from an anterior or posterior opening6,7. The case reported above was of the fenestra type. A summary of similar cases that have been previously reported is provided in Table 1.

Its symptoms vary from sporadic non-specific abdominal pain to emesis, abdominal distension and other clear signs of bowel obstruction5. Diagnosis is often difficult due to non-specific clinical findings and a low index of suspicion5. In previous literature, reviews of approximately 400 patients are available in whom diagnosis was performed; the majority of times the diagnosis was made in autopsy or frequently, after a prolonged period of symptomatology and complications, such as intestinal ischemia4. Since there are no clinical, biochemical or radiological signs that might lead to correct diagnosis, surgery is mandatory4,7,8. Although computed tomography can suggest the presence of an internal hernia, it may be impossible to diagnose the hernia through a defect of the broad ligament. A laparoscopic approach has been already described and may be useful, if available. It might lead to a shorter hospital stay, less pain and less wound-related complications6,12,15.

The case reported above emphasised the need for early intervention as it was possible to avoid bowel resection. The mortality of non-operative therapy for incarcerated or strangulated internal hernia is extremely high, and delay in surgical indication can lead to undue morbidity. The surgical approach is commonly straightforward and often requires just simple manual reduction4.

Thus, herniation through a defect of the broad ligament should be considered as a differential diagnosis of female patients presenting with intestinal obstruction without antecedents of surgical manipulation. Early intervention is important due to the risk of high morbidity when strangulation occurs.

Conclusion

Herniation through defects of the broad ligament represents a rare cause of intestinal obstruction and may lead to severe complications. It must always be considered as a possible aetiology in females without

<table>
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n, number of patients; NR, not reported; IQR: interquartile range.
Case Report

Consent

Written informed consent was obtained from the patient for publication of this case report and accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal.

References


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