Laparoscopic Treatment of a Pericecal Internal Hernia: A Case Report

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1. Abstract

1.1. Background: Internal hernias have an overall incidence of less than 1% but they constitute up to 5.8% of all small-bowel obstructions. Pericecal hernias are an uncommon type of internal hernias and represent a challenging diagnosis because of their low frequency and varied symptoms. We present the case of a pericecal hernia treated successfully with a laparoscopic approach and full recovery after surgery.

1.2. Presentation of Case: A 53 years old, female patient with a personal history of depression, osteoporosis, and irritable bowel syndrome consulted to the Emergency Department for abdominal pain and distension in the last 12 hours, associated with one vomit and diminished frequency in the passage of stools. The right abdomen was tender to palpation and blood work revealed no leukocytosis. A CT scan showed small bowel loops distended and displaced to the right parietocolic recess, lateral to the ascending colon. Exploratory laparoscopy was performed confirming the presence of small bowel loops incarcerated in the paracecal fossa. These ones were reduced with gentle maneuvers and the peritoneal folds incised to prevent recurrence. The patient was started on an oral diet two days after surgery and discharged home on the 3rd postoperative day.

1.3. Discussion: This is the case of a paracecal hernia, an uncommon type of pericecal internal hernias, treated successfully with a laparoscopic approach. Because of their low frequency, high suspicion and prompt diagnosis are mandatory in order to achieve good outcomes.

2. Keywords: Small bowel obstruction, Internal hernia, Pericecal hernia, Paracecal hernia, Laparoscopy

3. Introduction

Internal hernias are defined as the protrusion of a viscus through a normal or abnormal peritoneal or mesenteric defect within the confines of the peritoneal cavity [1]. They constitute up to 5.8% of all small bowel obstructions and can often be misdiagnosed with subsequent significant morbidity and mortality [1]. Paracecal hernia is an uncommon type of internal hernia caused by the herniation of a viscus through a defect formed by folds of the peritoneum in the paracecal area [2]. Laparoscopy is a valuable tool for both diagnosis and treatment, with the already known advantages of a minimally invasive approach [3]. Nevertheless, the laparoscopic manipulation of distended bowel loops remains controversial because of the high risk of perforation, a reduced space to work in the peritoneal cavity and the requirement of advanced...
laparoscopic skills. We present the case of a paracecal internal hernia diagnosed promptly and successfully treated with a laparoscopic approach.

4. Presentation of Case

A 53 years old female with a personal history of depression, osteoporosis, and irritable bowel syndrome presented to the emergency department with generalized abdominal pain in the last 12 hours, associated with nausea, one episode of vomit, and diminished flatus and stool passage. The abdomen was distended; tender to palpation accentuated on the right side, with defense but no peritoneal reaction. A blood work revealed no leukocytosis and discrete air retention in the small bowel but no air fluid levels were seen in the abdominal X-ray (Figure 1). An abdomen and pelvis CT scan showed small bowel loops distended and displaced to the right parietocolic recess, lateral to the cecum and ascending colon, with signs of parietal edema (Figure 2-3). Laparoscopy was performed. Small bowel loops were incarcerated in the paracecal fossa with signs of parietal hypoperfusion but peristalsis was not compromised. Intestinal loops were reduced and peritoneal folds were incised to prevent future recurrences (Video 1). On the 2nd postoperative day (POD) liquid diet was prescribed and tolerated with no inconvenience. On the 3rd POD the patient tolerated soft diet and was discharged home. Medium term control revealed adequate patient recovery with no major complications and no recurrence of symptoms.

5. Discussion

We present the case of aparacecal hernia, a very uncommon type of internal hernia, diagnosed on time and treated successfully with a laparoscopic approach. Internal hernias have an overall incidence of less than 1% but they constitute up to 5.8% of all small-bowel obstructions [1]. There are several types of internal hernias, the main types described by Meyer are: Paraduodenal (53% of all internal hernias), Pericecal (13%), Foramen of Winslow (8%), Transmesenteric and Transmesocolic (8%), Intersigmoid (6%) and Retroanastomotic (5%) [4]. Moreover, pericecal hernias can be sub classified into four types: hernias through the superior ileocecal recess, inferior ileocecal recess, paracolic paracecalsulcus, and retrocecal recess [2]. We did a Pubmed literature search including the terms “pericecal hernia”, “paracecal hernia”, “retrocecal hernia” and “ileocecal hernia” and found only 29 cases diagnosed and treated surgically: those mentioned by Inukai between 1980 and 2017 [2] and those presented by [5] and [6], including 9 cases treated with laparoscopic surgery. There have been also 2 cases of paracecal hernias diagnosed on CT scan that where managed non-operatively [7]. It is well known that laparoscopy is a valuable approach in the management of cases of small bowel obstruction [3,8]. In addition to the already known advantages of the minimally invasive approach (better pain control, cosmetic results, less incidence of incisional hernias and wound complications, better post operatory recovery), laparoscopy offers shorter length of stay, less formation of new adhesions, the possibility of ruling out differential diagnosis and limiting the size of the incision in case of conversion to open surgery. However, on the other hand, the laparoscopic manipulation of a distended bowel carries a high risk of perforation and the challenge of working on a reduced peritoneal cavity that may result in an incomplete adhesiolysis (Figure 3-5). These disadvantages confirm the requirement of highly trained laparoscopic surgeons when managing surgical cases of small bowel obstruction and maintain the controversy about the safety and feasibility of the laparoscopic approach. To the best of our knowledge, this would be the 10th case of a pericecal hernia treated through a laparoscopic approach with good outcomes. We believe that the report of this case contributes to the international literature, helping to maintain a high suspicion on this pathology and promotes the use of laparoscopy for its management.

6. Conclusion

Pericecal hernias are an uncommon type of internal hernia. High suspicion is mandatory in order to reach a prompt diagnosis and install adequate treatment on time. The laparoscopic approach is an excellent tool for both, diagnosis and treatment, with valuable advantages over open surgery.

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References