Laparoscopic treatment of a pericaecal internal hernia

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Abstract

We present the case of a pericaecal hernia treated successfully with a laparoscopic approach and full recovery after surgery. A 53-year-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 h, associated with one episode of vomit and diminished frequency in the passage of stools. The right abdomen was tender to palpation, and blood work revealed no leucocytosis. A computed tomography 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 paracaecal fossa. These ones were reduced with gentle manoeuvres, and the peritoneal folds incised to prevent recurrence. The patient was started on an oral diet 2 days after surgery and discharged home on the 3rd post-operative day.

Keywords: Internal hernia, laparoscopy, paracaecal hernia, pericaecal hernia, small bowel obstruction

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 Paracaecal 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 paracaecal 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 paracaecal internal hernia diagnosed promptly and successfully treated with a laparoscopic approach.

CASE REPORT

A 53-year-old female with a personal history of depression, osteoporosis and irritable bowel syndrome presented to the emergency department with generalised abdominal pain in the last 12 h, associated with nausea, one episode of vomit and diminished passage of stools. The abdomen was distended, tender to palpation accentuated on the right side, with no peritoneal reaction.
A blood work revealed no leucocytosis and discrete air retention in the small bowel, but no air fluid levels were seen in the abdominal X-ray. An abdomen and pelvis computed tomography (CT) scan showed small bowel loops distended and displaced to the right parietocolic recess, lateral to the caecum and ascending colon, with signs of parietal oedema.

Laparoscopy was performed. Small bowel loops were incarcerated in the paracaecal fossa with signs of parietal hypo-perfusion, but peristalsis was not compromised [Figures 1 and 2]. Intestinal loops were reduced, and peritoneal folds were incised to prevent future recurrences. On the 2nd post-operative 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 both no major complications and no recurrence of symptoms.

**DISCUSSION**

We present the case of a paracaecal 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 <1%, but they constitute up to 5.8% of all small bowel obstructions.[4] There are several types of internal hernias; the main types described by Meyers are paraduodenal (53% of all internal hernias), pericaecal (13%), foramen of Winslow (8%), transmesenteric and transmesocolic (8%), intersigmoid (6%) and retroanastomotic (5%).[4] Moreover, pericaecal hernias can be subclassified into four types: hernias through the superior ileocaecal recess, inferior ileocaecal recess, paracolic or paracaecal sulcus and retrocaecal 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 *et al.* between 1980 and 2017[2] and those presented by Aljaberi *et al.*[5] and Hiroki Otani, including nine cases treated with laparoscopic surgery. There have also been two cases of paracaecal hernias diagnosed on CT scan that were managed non-operatively.

It is well known that laparoscopy is a valuable approach in the management of cases of small bowel obstruction.[3] However, the laparoscopic manipulation of a distended bowel carries a high risk of perforation and the challenge of working on a reduced peritoneal cavity may result in an incomplete adhesiolysis. 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 pericaecal 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.

Declaration of patient consent
The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

Financial support and sponsorship
Nil.

Conflicts of interest
There are no conflicts of interest.

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