

## Case report

# Incarcerated paracecal hernia: a case report



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## ABSTRACT

Internal abdominal hernias are an infrequent cause of bowel obstruction still often underdiagnosed. Among adults, its causes can be congenital anomalies of intestinal rotation, postsurgical iatrogenic causes, trauma or infection diseases.

**KEYWORDS:** Hernia, abdominal; Paracecal hernia; Surgery

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## INTRODUCTION

An internal abdominal hernia is the protrusion of a viscous that herniates through an intraperitoneal aperture but remains within the peritoneal cavity (1). Congenital anomalies due to improper intestinal rotation, previous trauma, vascular or inflammatory diseases, or postsurgical iatrogenic causes are predisposing factors to internal herniation (2). Internal hernias are divided based on their location; they can be paraduodenal, pericecal, transmesenteric, pelvic, inter-sigmoid, supravesical and rarely omental hernias (3). A paracecal hernia, a type of an internal hernia, is a rare cause of obstruction of the small intestine. Failure of early recognition and reduction of this type of an internal hernia may lead to strangulation of the herniated intestine (4). We will present a case of an incarcerated paracecal hernia where laboratory and radiological findings were inconclusive, and the decision to operate was made solely based on the clinical presentation.

## CASE PRESENTATION

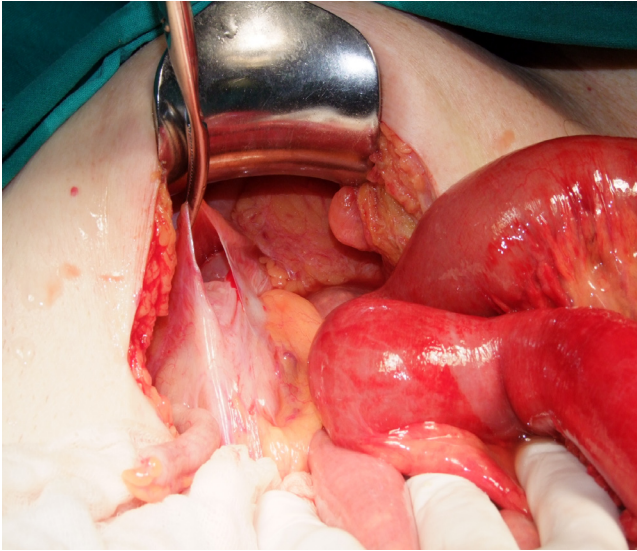
An 88-year old patient presented to the Emergency Department of our hospital with a 7-hour history of abdominal pain, followed by vomiting. The

patient previously underwent a cholecystectomy; otherwise, the patient's medical history was unremarkable. The clinical examination revealed tenderness and guarding in the lower right quadrant of the abdomen. Blood test results were completely normal (including leukocyte count and CRP), and an abdominal X-ray showed no certain signs of air-fluid level or intestinal distension. The abdominal ultrasound found that a part of the terminal ileum had a thickened intestinal wall, there were no signs of appendicitis or intra-abdominal fluid. A CT-scan was performed, the finding did not describe certain signs of intestinal obstruction/distension or the existence of an internal hernia.

We concluded that an exploratory laparotomy was indicated based on the clinical finding alone since the symptoms did not regress after symptomatic therapy. After the lower medial incision had been made, we found a segment of the distal ileum entrapped in a paracecal peritoneal opening (Figure 1). The segment was released, the intestine was vital with preserved peristalsis, and there was no indication for bowel resection. The peritoneal opening was sutured, and an appendectomy was performed.

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**Figure 1.** Segment of the distal ileum released from a paracecal peritoneal opening.

The postoperative course was uneventful. The control laboratory findings were normal, and the abdominal drain was removed on the 3rd postoperative day. The patient was discharged on the 4th postoperative day, subsequent ambulatory follow-ups were also uneventful and showed no minor or major complications.

## DISCUSSION

Pericecal hernias account for approximately 13% of all internal hernias (5). Although there are four subtypes (ileocolic, retrocecal, ileocecal, and paracecal) of pericecal hernias, most commonly the herniated loop consists of an ileal segment protruding through a defect in the cecal mesentery and extending into the right paracolic gutter (6).

Clinical diagnosis of an incarcerated hernia can pose a challenge because clinical symptoms can be confused with inflammatory bowel disease, appendicitis, or other causes of small bowel obstruction (7). As mentioned, failure to recognize and surgically treat this type of incarceration can lead to strangulation of the herniated intestine, which increases morbidity and mortality in these patients.

CT scan is considered the gold standard test to diagnose an internal abdominal hernia (8). In our case, radiological findings (X-ray, ultrasound and CT) failed to diagnose the herniation or indicate certain signs of small bowel obstruction. Although the symptoms were unspecific, surgical intervention was deemed to be necessary because of the risk of complications which could have developed. The definitive diagnosis was made during surgery as described. Since our patient didn't have likely

predisposing factors (such as trauma, inflammatory diseases or previous surgery in the area), the cause for the peritoneal defect seems to be congenital.

Laparoscopy can play a useful role in the treatment of internal hernia causing small bowel obstruction when the pathology has been detected preoperatively (9). Since the diagnosis hasn't been confirmed before the surgical intervention, in our case we opted for the open approach.

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