causapedia
hakemli olgu dergisi
e-ISSN:2147-2181

A rare cause of mechanic intestinal obstruction: Primary Internal Pericecal Hernia

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Başvuru: 07.11.2013
Kabul: 01.01.2014
Yayın: 21.01.2014

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Özet

İnternal herniler, batın içi visseral organların peritoneal veya mesenterik defektten fıtıklaşmasıdır. Fıtıklaşan organ genellikle ince barsaklardır. Fıtıklaşan organın strangulasyon riski nedeni ile internal herniler tehlikeli ve ölümcül olabilir. İki günden beri karın ağrısı, bulantı, kusma yakınmaları olan seksen altı yaşında erkek hasta kliniğimize başvurmuştur. Bu yazımızda, hastanın, barsak tıkanıklığı ile belirti veren periçekal internal hernisi tomografi ve perop görüntüleri ile birlikte tartışılması amaçlanmıştır. İleri yaş hastalarda mekanik intestinal obstruksiyon ayırıcı tanısında her ne kadar az rastlansa da internal herniler akılda bulundurulmalıdır.

Anahtar kelimeler: *Periçekal, Herni Obstruksiyon*

Abstract

Internal hernias are defined as the herniation of intraabdominal visceral organs through peritoneal or mesenteric defects. The most commonly herniated organ is the small intestine. These hernias can be either persistent or intermittent. Because of the strangulation risk of the herniated organ, internal hernias can be dangerous and deadly. An eighty six years old male patient had complaints of abdominal pain, bloating and vomiting for the past two days. We aimed to discuss an internal pericecal hernia case with intestinal obstruction symptoms along with tomography and preoperative images. Although rarely seen, internal hernias should be kept in mind for the differential diagnosis of mechanic intestinal obstruction in patients with advanced age.

Keywords: *Pericecal, Hernia Obstruction*

Introduction

Internal hernias are defined as the herniation of intra- abdominal visceral organs through peritoneal or mesenteric defects. These defects can either be post traumatic, postoperative or congenital. The diagnosis of internal hernias are difficult and are made clinically and radiologically [1]. Internal hernias are rare and comprise 0.2 and 0.9% of all intestinal obstructions and account for 0.6 and 5.8% of the intestinal obstructions due to hernias [2,3]. The most commonly herniated organ is the small intestine. These hernias can be either persistent or intermittent. Because of the strangulation risk of the herniated organ, internal hernias can be dangerous and deadly.

Many patients present with progressive chronic pain. They can be misdiagnosed as gastro esophageal reflux, gastritis or biliary colic. Symptoms of internal hernias can be insidious or can have the symptoms of intestinal obstruction. They are generally diagnosed during laparotomies performed for intestinal obstructions.

There are a few imaging indicators performed for diagnostic purposes. These include small intestine loops with abnormal localization, loops that are fixed inside the hernia sac and dilated intestinal loops with countable segmental stasis. Delays in diagnosis increase the mortality rates up to 20% [4].

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e-ISSN:2147-2181

We aimed to discuss an internal pericecal hernia case with intestinal obstruction symptoms along with tomography and preoperative images.

Case Report

An 86-year-old man was admitted because of severe abdominal pain, bloating, nausea and vomiting during the previous 2 days. There was no history of abdominal procedures. His temperature was 38°C, pulse rate was 100 beats/ min and blood pressure was 100/60 mmHg. Physical examination revealed metallic resonance quality of bowels sounds on auscultation in addition to distention and generalized abdominal tenderness without defense or rebound. Abdominal X-ray showed normal findings other than air fluid levels. Abdominal computed tomography (CT) revealed dilated small intestinal loops in the right pericecal area accompanied by stretching of the intestinal mesenteric structures. These findings were interpreted as mechanic intestinal obstruction (Figure 1, 2). Preoperative laboratory tests were all within normal ranges except elevated blood urea nitrogen (BUN):30,1mg/dl and creatinine:1,88mg/dl. Adequate hydration, diuresis and laparotomy were performed sequentially. At laparotomy, herniation of 40 cm segment of the terminal ileum from the retrocecal area to the paracolic fossa was detected (Figure 3, 4). The herniated small intestine segment was reduced into the abdomen from the paracolic area. Although there were partial ischemic areas on the herniating intestinal segment, the circulation was found to be intact following the heat application (Figure 5). Anatomical defect at the retrocecal area was primarily repaired with 2/0 polyglactic asit (vicryl), which was followed with abdominal wall closure. Postoperative follow-up revealed an acute renal failure recovering at 7th day and discharge from hospital at 10th day following the laparotomy. Cytology of the peritoneal fluid obtained at laparotomy resulted in non-malignant cells.

Discussion

Paraduodenal hernias are the most common type of the intraabdominal hernia and comprise more than half of the cases. Pericecal, transmesenteric, transmental, intersigmoid, supravesicle and foramen winslow hernias are the other forms of internal hernias[1,5]. Four areas have been described in the formation of pericecal herniations, the superior ileocecal recess, the inferior ileocecal recess, the retrocecal recess and the paracolic sulcus[6,7]. Our case was a pericecal hernia, with the retrocecal area forming the hernia orifice. Because the retrocecal area is large, large amounts of small intestinal loops can enter. Our case had a herniated segment of approximately 40 cm in this area. In some studies, it has been reported that abdominal ultrasonography (USG) can be helpful for diagnosis. Dilated intestinal ans, the presence of a transitional zone between dilated and non-dilated intestinal ans and the presence of non-compressed non-peristaltic small intestinal loops that are covered with a thin sac are all USG findings suggestive of herniation[8]. In the past, the diagnosis was made with clinical evaluation, direct abdominal x rays and barium enema. More recently and with more frequency, tomography is used for diagnosis[9]. CT is particularly helpful for preoperative diagnosis. Knowing the normal structure of the peritoneal cavity and defining the type of the hernia with CT is helpful, it can locate abnormally dilated small intestinal loops that led to mechanic obstruction and visualize the stretched and edematous mesenteric structure at the orifice of the hernia[10]. CT was performed for diagnosis in our case too, and the pericecal hernia, with dilated small intestine loops at the herniation area and stretched mesenteric structures, was visualized on CT. Although laparotomy is the general procedure performed for the treatment of internal hernias, in recent years, laparoscopic surgical procedures have become popular[11,12].

Although rarely seen, internal hernias should be kept in mind for the differential diagnosis of mechanic intestinal obstruction in patients with advanced age. CT examination should be the first choice for diagnosis; and after achieving diuresis, laparotomy should be performed as soon as possible. Delays in treatment can cause strangulation of the incarcerated segment.

e-ISSN:2147-2181

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Information Presentation

This case was presented at the III. Çukurova Coloproctology and Stomatherapy Symposium, 12-14 April, 2007, Adana, Turkey.