World Journal of Surgery and Surgical Research

Case Report
Published: 02 Aug, 2019

Congenital Middle Mesocolic Hernia in a Middle-aged Female: A Case Report

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Abstract

Internal hernias are a rare cause of small bowel obstruction. They can be either congenital or acquired. The middle mesocolic hernia is the rarest of all the congenital mesocolic hernias. In our case report we present a 47-year-old female with progressive epigastric pain and complaints of vomiting caused by a middle mesocolic hernia.

Keywords: Internal hernias; Mesocolic hernia; Epigastric pain

Introduction

Internal hernias are a rare cause of small bowel obstruction (0.2% to 0.9%). They can be either congenital or acquired. Internal hernias have an incidence of 1% to 2% of all hernias [1-4]. When strangulation is present and left untreated the overall mortality rate is around 50% [1,2,6]. Of all the internal hernias, the congenital mesocolic hernias, also known as paraduodenal hernias, are the most common accounting for 30% to 53% of all cases. There are three types of congenital mesocolic hernias:

1) Left congenital mesocolic hernias (75%), 2) Right congenital mesocolic hernia (25%) and 3) The middle mesocolic hernia, which is extremely rare [2,5]. Mesocolic hernias are most often congenital lesions that result from abnormal rotation of the gut. The primitive midgut undergoes a 270° counterclockwise rotation around the superior mesenteric artery somewhere between the fifth and twelfth week of normal gestation [2,7]. Congenital transverse/middle mesocolic hernias are the result of a reversed rotation of the midgut and an invagination of the transverse mesocolon and a part of the right colon [2]. Most of the congenital mesocolic hernias are diagnosed between the fourth and sixth decades of life and are more frequently reported in male patients with a sex ratio of 3:1 [5].

Case Presentation

A 47-year-old female without a relevant medical history presented at the emergency department with progressive abdominal pain in the epigastric region. For two days, she had visited the general practitioner two days ago who prescribed a proton pump inhibitor. The main complaints were vomiting and a distended abdomen. Vital signs were a heart rate of 107, a blood pressure of 138/85,

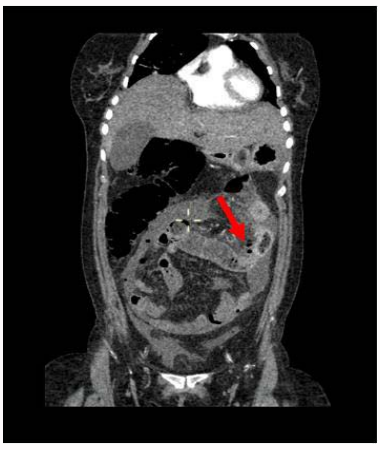

Figure 1: Deviant position of the splenic flexure in the left lower abdominal quadrant.

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Received Date: *04 Jul 2019*
Accepted Date: *30 Jul 2019*
Published Date: *02 Aug 2019*

Citation:
Linnemann RJA, van Zwieten TH, Kelder W. Congenital Middle Mesocolic Hernia in a Middle-aged Female: A Case Report. World J Surg Surgical Res. 2019; 2: 1147.

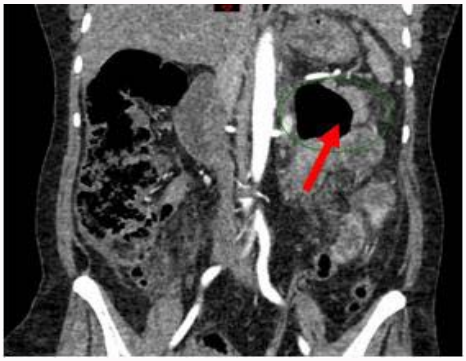

Figure 2: Intestinal ischemia with perforation and free fluids in the left upper abdominal quadrant as a sign of peritonitis.

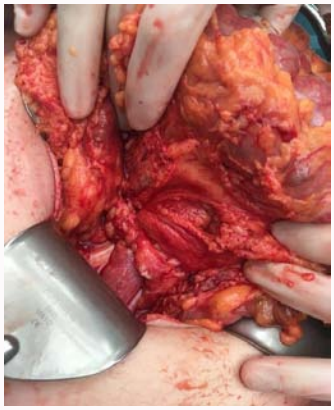

Figure 3: Herniation of the entire small intestine through the transverse mesocolon.

a respiratory rate of 14 and a temperature of 37.8°C. At physical examination a distended right abdomen was found, and there was diffuse pain in the epigastric region without palpable masses. Laboratory findings showed a hemoglobin level of 8.4 mmol/L, a leukocyte count of 8.5 L × 109 L and a C-Reactive Protein (CRP) level of 436 mg/L.

A CT-scan showed a deviant position of the splenic flexure, which was in the left lower abdominal quadrant (Figure 1). This finding was suspect for a herniation/volvulus with perfusion deficits of jejunal loops of in the left upper abdominal quadrant. It also showed intestinal ischemia with perforation and free fluids in the abdomen as a sign of peritonitis (Figure 2).

An emergency laparotomy was performed and showed the entire small intestine located in the upper abdominal quadrant, covered in a peritoneal sac. The entire small intestine appeared to be herniated through the transverse mesocolon (Figure 3). Perforation of the jejunum was found at the side of the herniation (Figure 4). Small wedge resection was performed, and continuity was restored through an isoperistaltic side-to-side anastomosis. The small defect in the transverse mesocolon was closed with sutures. Postoperative, the patient had a nasogastric tube and received parenteral nutrition. At the 5th post-operative-day bowel function recovered, but there was a persistent high production of gastric fluids through the nasogastric tube. At day eight, the patient started with clear fluids, and at day 10, she started a normal diet. Thirteen days after surgery, the patient was discharged from the hospital in a good clinical condition. At the last outpatient visit, she remained without further complaints.

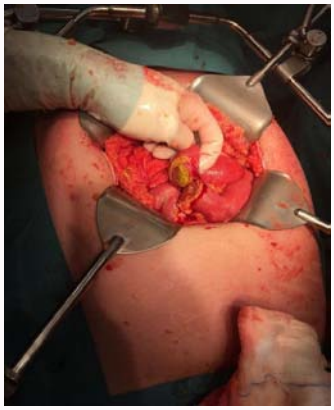

Figure 4: Perforation of the jejunum at the side of the herniation.

Discussion

There are three types of congenital mesocolic hernias, of which the middle mesocolic hernia is the rarest [2,5]. In 69% of all cases of congenital mesocolic hernias, the patient had chronic nonspecific symptoms before an episode of strangulation or bowel obstruction [6]. These chronic nonspecific symptoms often include dyspepsia, vomiting, and intermittent colicky abdominal pain [8]. In the case of strangulation mortality rates of around 50% have been described in the literature [1,2,6].

Our patient had no medical history and experienced symptoms of dyspepsia only two days before the presentation. Our case report shows that in case of a patient with signs of acute strangulation, an urgent CT scan is necessary to reveal the diagnosis. Omitting the CT scan in a case like this might lead to high morbidity and mortality rates as described in the literature on this rare diagnosis of a (middle) mesocolic hernia.

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