



Gangrenous Cecal Volvulus; A Case Report and Review of Literature

Gangrenöz Çekum Volvulusu; Bir Olgu Sunumu ve Literatürün Derlenmesi

Gangrenous Cecal Volvulus

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Özet

Çekal volvulus akut intestinal obstrüksiyonun nadir bir sebebi olarak, çekum ve terminal ileumun kendi mezenterleri etrafında ve aksial planda bükülmesidir. Çekal volvulus derhal laparotomi gerektiren acil cerrahi bir durumdur. Hastanın genel durumuna bağlı olmak kaydı ile rezeksiyon ve anastomoz önerilen tedavi seçeneğidir. Bu yazıda, karın ağrısı ve distansiyon şikayeti ile başvuran gangrenöz çekum volvulusu tanısı konan ileri düzeyde mental retarde 45 yaşında bayan hasta sunulmuştur.

Anahtar Kelimeler

Volvulus; Çekum; İntestinal Obstrüksiyon; Karın Ağrısı

Abstract

Cecal volvulus as an uncommon cause of acute intestinal obstruction is to axial twist of the cecum and terminal ileum around their mesentery. Cecal volvulus is a surgical emergency requiring urgent laparotomy. Resection and anastomosis is the proposed choice of the operation depending on the general condition of the patient. In this paper, we report a case of gangrenous cecal volvulus seen in a severely mentally retarded 45-year-old woman who presented with abdominal pain and distension.

Keywords

Volvulus; Cecum; Intestinal Obstruction; Abdominal Pain

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Introduction

Cecal volvulus is a life-threatening surgical emergency caused by malrotation of the cecum, which results in partial or complete bowel obstruction and subsequent vascular impairment to the bowel. It is a rare cause of intestinal obstruction [1,2]. In this paper, we report a case of gangrenous cecal volvulus seen in a severely mentally retarded 45-year-old woman who presented with abdominal pain and distension. She had no surgical history. She was successfully treated with right colectomy and primary anastomosis.

Case Report

A 45-year-old woman was admitted with acute abdominal pain, distension and constipation. The patient had a temperature of 38.2°C, blood pressure of 110/70 mm Hg, and a heart rate of 92 beats per minute. On physical examination, her abdomen was diffusely distended with rebound tenderness. The abdomen was appreciated in the hypogastrium upon palpation. Laboratory studies demonstrated leukocytosis (12700 per cubic mm), hypokalemia, and prerenal azotemia. Abdominal radiographs were obtained and showed massively distended large bowel, and was suggestive of obstruction due to volvulus (Figure 1). A contrast-enhanced computed tomography (CT) scan of the abdomen showed grossly dilated cecum and ascending colon measuring approx-15 cms in maximum calibre occupying central position in the abdomen (Figure 2).

An emergent laparotomy disclosed the axial twisting of the cecum, involving the terminal ileum and the ascending colon. Early signs of strangulation necrosis were noted at the volvulus and surrounding area (Figure 3). A right hemicolectomy and distal ileal resection were performed, followed by an ileocolic anastomosis. The patient made an uneventful recovery and was discharged home on the day 6.

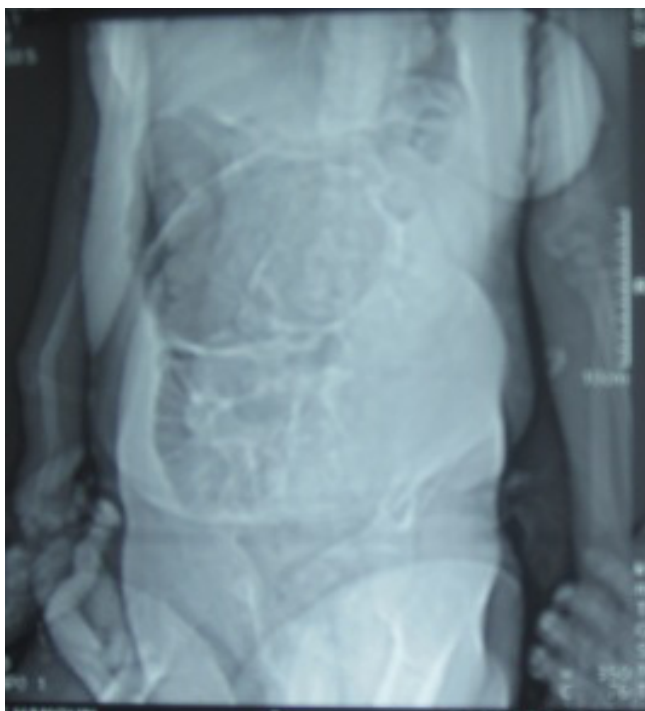


Figure 1. Abdominal radiographs were obtained and showed massively distended large bowel, and was suggestive of obstruction due to volvulus.

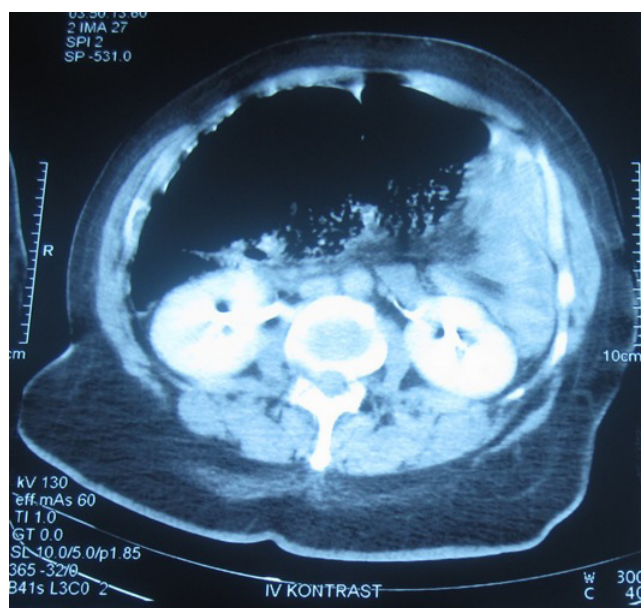


Figure 2. A contrast-enhanced computed tomography (CT) scan of the abdomen showed grossly dilated cecum and ascending colon measuring approx-15 cms in maximum calibre occupying central position in the abdomen.



Figure 3. Early signs of strangulation necrosis were noted at the volvulus and surrounding area.

Discussion

Cecal volvulus is a rare condition, and its incidence is reported to range from 2.8 to 7.1 per million people per year [2]. The majority of patients with caecal volvulus present a complete axial rotation that produces twisting of the mesentery and its vessels, affecting caecal vascularisation [3]. Cecal volvulus is the result of abnormal mobility of the cecum caused by developmental improper fusion of cecal mesentery with the posterior parietal peritoneum [1]. In the young age group, the volvulus was caused by postsurgical adhesions, congenital malformations, Hirschsprung's disease, or pregnancy [4].

Cecal volvulus usually develops in younger patients and more often in women [5]. In contrast, volvulus in the aged patients was associated with chronic constipation, distal colon obstruction, or senile dementia [6]. The clinical symptoms of caecal volvulus are similar to those of blockage of the small intestine. Patients exhibit symptoms consistent with bowel obstruction, including abdominal pain, distension, constipation, obstipation, nausea, and vomiting [7]. In cecal volvulus, the radiological findings that can be detected on plain radiographs are cecal dilatation, air-fluid levels, small bowel dilatation, absence of gas in distal colon,

and dilated small bowel loops localized lateral to a dilated cecum[2]. Abdominal x-rays may be diagnostic, however if further imaging is felt necessary then computed tomography (CT) or watersoluble contrast enema should be diagnostic. The “coffee bean”, “bird beak”, and “whirl” signs are three of the common CT findings associated with acute cecal volvulus. The CT scan finding of a whirl sign is highly suggestive of volvulus. This sign is caused by soft tissue density bowel loops whirling around a point of torsion with low-attenuating mesentery and enhancing blood vessels radiating from the bowel[8].

Surgical treatment of cecal volvulus consists of untwisting the bowel, decompressing the distended segments, removing the devitalized tissue and preventing recurrence. When the cecum is viable then cecostomy, cecopexy or resection is acceptable depending on the condition of the patient. The preferred treatment for a gangrenous colon is resection, usually a right hemicolectomy. The decision to perform a primary anastomosis or ileostomy depends on the patient’s condition and the situation of the colon at the time of surgery[6,7,9].

Cecal volvulus is an infrequently encountered clinical condition and an uncommon cause of intestinal obstruction. Therapeutic alternatives depends on the patient’s history, the clinical symptoms, the surgical findings, and the surgeon training in the different techniques. Surgery remains the accepted approach in managing cecal volvulus, but selection of the best surgical procedure to use remains controversial. The preferred treatment for a gangrenous colon is resection, usually a right hemicolectomy.

Competing interests

The authors declare that they have no competing interests.

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