World Journal of Advanced Research and Reviews
eISSN: 2581-9615 CODEN (USA): WJARAI
Cross Ref DOI: 10.30574/wjarr
Journal homepage: https://wjarr.com/

(CASE REPORT)

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Caecal Volvulus: A Rare Cause of Intestinal Obstruction: Case Report

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World Journal of Advanced Research and Reviews, 2025, 27(03), 1623-1626

Publication history: Received on 16 August 2025; revised on 23 September 2025; accepted on 25 September 2025

Article DOI: https://doi.org/10.30574/wjarr.2025.27.3.3311

Abstract

Caecal volvulus is the second most common site of colonic volvulus after the sigmoid colon and before the transverse colon. It usually occurs in patients with an abnormally mobile caecum, and its mechanism involves torsion or tilting. Clinically, it presents as an acute intestinal obstruction due to strangulation. Abdominal X-ray and abdominal CT scan are the diagnostic modalities of choice. Treatment consists of emergency surgery with resection of the caecum and terminal ileum. We reportin our study the case of a 45-year-old female admitted to the emergency department with acute intestinal obstruction. The diagnosis of caecal volvulus was confirmed by abdomino-pelvic CT scan. The patient underwent right hemicolectomy with ileocolostomy. Postoperative recovery was with no complications.

Keywords: Intestinal obstruction; Caecal volvulus; Ileocecal resection; Right hemicolectomy

1. Introduction

Caecal volvulus was first described by Rokitansky in 1837. It is defined as torsion of the right colon and terminal ileum around the right colic vascular pedicle, accounting for about 1% of all intestinal obstructions. Despite several published reports, the clinical presentation and management remain controversial [1,2,3]. We report here a case of cecal volvulus treated surgically in our department.

2. Case Presentation

A 45-year-old female presented to the emergency department with acute intestinal obstruction characterized by cessation of stool and gas passage, diffuse abdominal pain, abdominal distension, and fecaloid vomiting evolving over 04 days. In the Clinical exam, the patient was febrile with a distended abdomen and hypertympanic abdomen, diffuse guarding, and an empty rectal ampulla. Hernial orifices were free. Laboratory tests find WBC count was 8,000/mm^3, CRP was elevated at 127 mg/L, and renal function was impaired with creatinine at 24 mg/L. Radiological findings: Abdominal X-ray revealed multiple colonic air-fluid levels. Contrast-enhanced abdomino-pelvic CT scan showed marked small bowel dilatation upstream of an ileocecal volvulus, with poor cecal wall enhancement and minimal peritoneal effusion.

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Figure 1 Abdominal X-ray revealed multiple colonic air-fluid levels

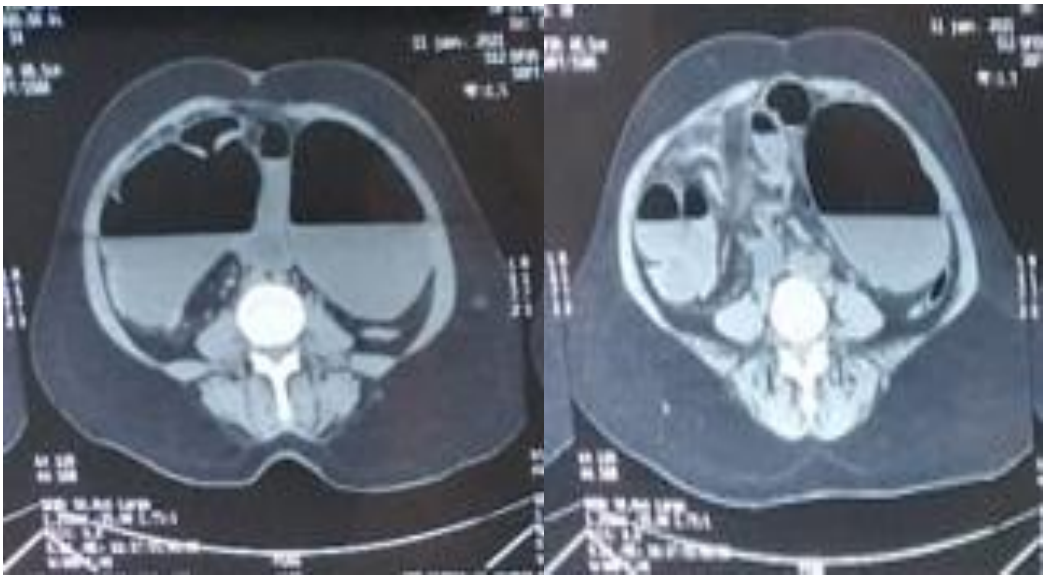

Figure 2 Abdomen CT scan showed marked small bowel dilatation upstream of an ileocecal volvulus

The patient underwent emergency laparotomy via a midline incision. Exploration revealed a twisted caecum with ischemia of the right colon. A right hemicolectomy with ileocolostomy was performed. Recovery was uneventful, and restoration of intestinal continuity was achieved two weeks later.

Figure 3 Per operative revelation of a twisted caecum with ischemia of the right colon

3. Discussion

Caecal volvulus is a torsion of the right colon around its mesenteric axis, possible only in cases of abnormal cecal mobility, often due to incomplete embryological rotation or defective peritoneal fixation. Two physiologic mechanisms are described, Axial torsion and Caecal bascule. Diagnosis is challenging because symptoms are nonspecific and pain intensity is variable. While plain abdominal radiography may show air-fluid levels, its sensitivity is low. [4,5,6,7]

CT scan is the most reliable diagnostic tool, identifying complications such as ischemia or perforation. Endoscopic detorsion may be attempted in the absence of ischemia but carries a high risk of perforation. [8,9,10]

Definitive surgical treatment remains debated. Right hemicolectomy with primary anastomosis is widely recommended, even in the absence of necrosis, to eliminate recurrence risk. Caecostomy and caecopexy have higher recurrence and complication rates. Laparoscopic approaches are rarely feasible in emergencies due to marked distension. [11,12,13,14]

4. Conclusion

Caecal volvulus is a rare but serious cause of intestinal obstruction, favored by congenital abnormalities of cecal fixation. Diagnosis requires high suspicion in acute abdominal pain with suggestive radiological signs. Prompt surgical intervention reduces morbidity and mortality.

Compliance with ethical standards

Disclosure of conflict of interest

The authors declare that they have no conflict of interest.

Statement of informed consent

Informed consent was obtained from all individual participants included in the study.

References

[1] Rokitansky C. Intestinal strangulation. Arch Gen Med. 1837; 14(1): 202-210.

[2] Pirró N, Merad A, Sielezneff I, Sastre B, Di Marino V. Cecal volvulus, anatomical and pathophysiological bases: about 8 consecutive cases. *Morphologie*. 2006 ;90(1):19-20

[3] Abita T, Lachachi F, Durand-Fontanier S, Maisonnette F, Roudaut V, Valleix D, Descottes B. Cecal volvulus. *Journal de Chirurgie*. July 2005;142(4):220-224.

[4] Berger JA, Leersum MV, Plaisier PW. Cecal volvulus: Case report and overview of the literature. European Journal of Radiology Extra. 2005; 55(4): 101-103.

[5] O'Mara CS, Wilson TH Jr, Stonesifer GL, Cameron JL. Cecal volvulus: analysis of 50 patients with long-term follow-up. Ann Surg. 1979; 189(6): 724-731.

[6] Moore CJ, Corl FM, Fishman EK. CT of cecal volvulus: unravelling the image. AJR Am J Roentgenol. 2001; 177(1): 95-98.

[7] Perret RS, Kunberger LE. Case 4: Cecal volvulus. AJR Am J Roentgenol. 1998; 171(3): 855-860.

[8] Montes H, Wolf J. Cecal volvulus in pregnancy. AJR Am J Roentgenol. 2001; 177(1): 95-99.

[9] Neil DA, Reasbeck PG, Reasbeck JC, Effeney DJ. Cecal volvulus: ten years experience in an Australian teaching hospital. Ann R Coll Surg Engl. 1987; 69(2): 283-285.

[10] Friedman JD, Odland MD, Burbrick MP. Experience with colonic volvulus. Dis Colon Rectum. 1989; 32(1): 409-416.

[11] Breda R, Mathieu L, Mlynski A, Montagliani L, Duverger V. Volvulus du cæcum. J Chir (Paris). 2006; 143(1): 330-332.

[12] Sedik A, Bar EA, Ismail M. Cecal volvulus: Case report and review of literature. Saudi Surg J. 2015; 3(2): 47-49.

[13] Katoh T, Shigemori T, Fukaya R, Suzuki H. Cecal volvulus: Report of a case and review of Japanese literature. World J Gastroenterol. 2009; 15(20): 2547-2549.

[14] Majeski J. Operative therapy of cecal volvulus combining resection with colopexy. Am J Surg. 2005; 189(2): 211-213.