

Mechanical Colonic Obstruction Due to Cecal Volvulus: A Case Report

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Abstract:

Cecal volvulus is a rare cause of mechanical colonic obstruction, accounting for approximately 1–2% of cases. We report the case of a 54-year-old man with no significant medical history, who presented with chronic constipation complicated by a four-day history of fecal and gas retention. Abdominopelvic CT revealed a cecal volvulus with a vascular whirl sign, cecal wall thinning, mesenteric fat stranding, and moderate peritoneal effusion, without definitive signs of ischemia. An emergency ileocolic resection with primary anastomosis was performed. This case highlights the importance of CT imaging in the prompt diagnosis and management of this rare but potentially life-threatening condition. Surgical resection remains the treatment of choice to prevent complications and recurrence.

Keywords: Cecal volvulus, colonic obstruction, abdominal CT, surgical emergency.

Case Report

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INTRODUCTION

Cecal volvulus is an uncommon cause of colonic obstruction, accounting for about 1–2% of mechanical large bowel obstructions [1]. It results from torsion of the right colon around its mesenteric axis, which is only possible when the cecum is abnormally mobile, often due to incomplete peritoneal fixation of embryological origin [2]. This torsion can cause complete obstruction, with a risk of strangulation, ischemia, and colonic necrosis—thus constituting a surgical emergency [3].

Case Report

We report the case of a 54-year-old male with no significant past medical history, who presented with chronic constipation complicated by a four-day history of complete cessation of stool and gas passage.

On clinical examination, moderate abdominal distension was noted. Digital rectal examination revealed fecal impaction, suggesting a possible associated distal obstruction.

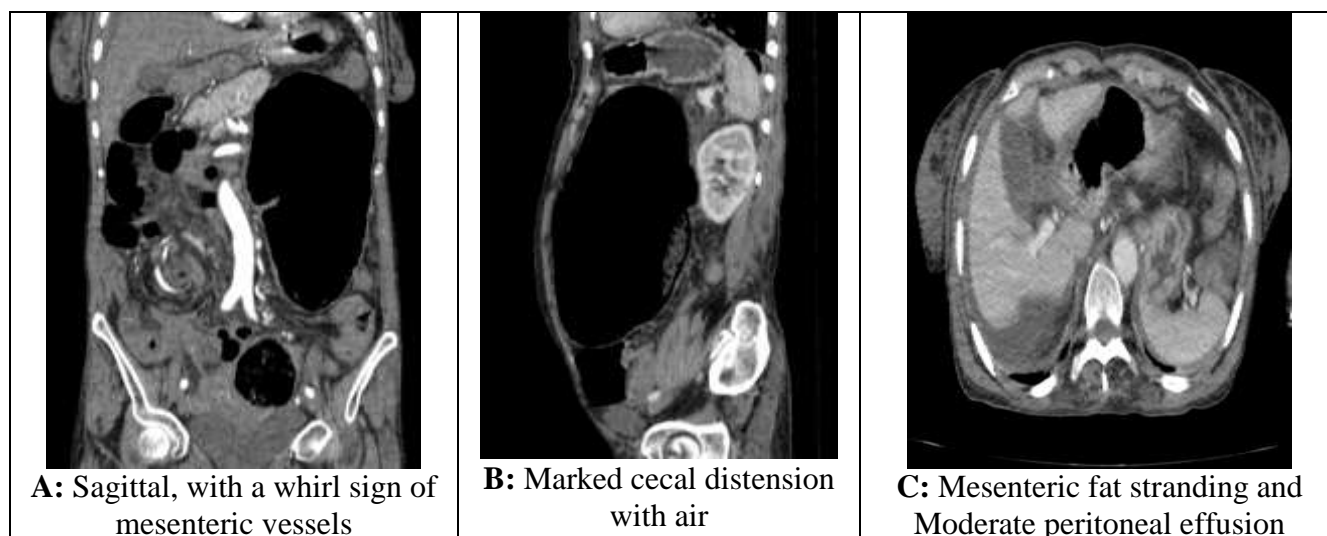
To assess the obstructive syndrome, an abdominopelvic CT scan was performed without and then with intravenous iodinated contrast during the arterial and portal phases. Imaging revealed:

- Marked cecal distension with air, measuring **9 cm in maximum diameter**, proximal to two caliber transition zones located in the right flank, with a **whirl sign** of mesenteric vessels (branches of the superior mesenteric artery) at this level.
- **Thinning of the cecal wall**, giving a "ghost wall" appearance in places.
- **Mesenteric fat stranding**.
- **Moderate peritoneal effusion** seen in the perihepatic, perisplenic regions and both paracolic gutters.
- **No pneumoperitoneum**.
- **No mural pneumatosis**.
- **No bowel wall thickening** detected elsewhere.

These findings confirmed the diagnosis of **mechanical colonic obstruction due to cecal volvulus**.

Given the urgent diagnosis, the patient was taken to the operating room for emergency surgery. An **ileocolic resection with immediate anastomosis** was performed,

in accordance with current recommendations to reduce the risk of recurrence and ischemic complications.



DISCUSSION

Cecal volvulus presents diagnostic challenges due to its nonspecific clinical presentation, which may obscure the severity of the condition. Clinical evaluation should be promptly complemented by imaging [4]. **Abdominal CT is the gold standard**, as it not only confirms the volvulus but also assesses bowel viability and detects complications [5, 6].

Surgical treatment is mandatory. While detorsion and cecopexy may be considered, they carry a high risk of recurrence. **Ileocolic resection** is regarded as the definitive treatment, providing the best long-term outcomes and significantly reducing morbidity and mortality [7].

CONCLUSION

This case illustrates the importance of rapid and accurate CT evaluation in a patient presenting with signs of bowel obstruction and constipation. Prompt imaging enabled the diagnosis of this rare but serious condition—**cecal volvulus**. Emergency surgical resection remains the gold standard, offering the best prognosis in terms of both function and survival.

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