

CECAL VOLVULUS PRESENTING AS ACUTE INTESTINAL OBSTRUCTION: A CASE REPORTIshwar Charan, Akhil Kapoor^{1*}, Vikas Jain² and Namrata Jagawat³

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ABSTRACT

Cecal volvulus is a rare but important cause of large bowel obstruction. A 48-year-old man presented to our medical department in casualty with complain of pain abdomen, inability to pass flatus and motion and increasing abdominal distension with vomiting for 2 days duration. X-ray flat plate abdomen showing multiple air fluid levels suggestive of intestinal obstruction. An emergency exploratory laparotomy was performed. A gangrenous patch was found on anterior wall of cecum. The gangrenous patch was excised, derotation and cecostomy was performed and cecopaxy was done. Abdominal wall was closed after putting an abdominal drain in pelvic cavity inside. His recovery was uneventful.

KEYWORDS: Cecal volvulus; intestinal obstruction; air-fluid level.**INTRODUCTION**

Cecal volvulus is a very rare cause of large bowel obstruction accounting for about 1% of the cases.^[1] In most of the patients with cecal volvulus, the torsion is actually located in the ascending colon above the ileocecal valve, thus, the term cecal volvulus is a misnomer in such patients.^[2] It is a closed loop obstruction, thus it leads to early vascular compromise with subsequent gangrene and perforation.^[3] Hence, early diagnosis is must to reduce the high mortality rate with this condition. We are presenting a case of acute intestinal obstruction in a 48-year-old male who was subsequently diagnosed as a case of cecal volvulus.

CASE REPORT

A 48-year-old man presented to casualty of our hospital with complaint of pain abdomen for 3 days, inability to pass flatus and stools for 5 days and increasing abdominal distension with vomiting for 2 days duration. There was no history of trauma/ bleeding per rectum. On examination, the patient was conscious, oriented with blood pressure 100/62 mm of Hg, and temp of 101.9 F. Fluid resuscitation was started immediately. On further examination, abdomen was mildly tender with muscle guarding present. Per rectal examination did not reveal any intraluminal growth. X-ray flat plate abdomen demonstrated a prominent segment of dilated intestine suggestive of cecal volvulus (Figure 1). His laboratory studies showed white blood cell count of 15,500 cells/cmm, haemoglobin of 12.8 gm%, packed cell volume of 34.8%, and normal electrolytes. An urgent CT

scan of the abdomen showed “coffee bean sign” in the mid-anterior abdomen and “whirl sign” in the right lower quadrant confirming the diagnosis of acute cecal volvulus (Figure 2). An emergency exploratory laparotomy was performed. 200 ml of haemorrhagic free fluid was drained. A gangrenous patch was found on anterior wall of cecum (Figure 3). The gangrenous patch was excised, derotation and caecostomy was performed and caecopexy was done. The abdominal wall was closed after putting a drain in pelvic cavity. His post operative recovery was uneventful.



Figure 1: Plane abdominal radiography showing dilated cecum and dilated small bowel loops adjacent to it.



Figure 2: Abdominal CT scan showing “coffee bean sign” in the mid-anterior abdomen (depicted by yellow arrow) and “whirl sign” in the right lower quadrant (depicted by the white arrow).



Figure 3: Intra-operative picture showing a segment of dilated cecum and the point of rotation around the mesentery.

DISCUSSION

Cecal volvulus is twisting of the cecum around its mesentery resulting in its obstruction. Though exact etiology is unknown, there are two important predisposing factors for the development of a cecal volvulus.^[4] Firstly, there may be developmental failure of peritoneal fixation which frees the proximal colon. The incidence of such anomaly is estimated to be 11-25% of the population. Secondly and more importantly, there may be restriction of the bowel at a fixed point due to adhesion or mass that serves as a fulcrum for rotation.^[4] In our patient, there was no prior history of abdominal surgery, pelvic mass, coughing, or extreme exertion. Since the clinical presentation is non-specific as in the present case, thus, radiological investigations play a major role in reaching up to the accurate diagnosis. Plain abdominal radiography and computed tomography scan are the examinations of choice. In our case, there was gross cecal dilatation along with multiple dilated small bowel loops seen on the lateral side of the dilated cecum. On axial CT images, cecal volvulus is suggested by the extreme dilatation of the cecum. The two limbs of the looped obstruction gradually taper and converge at the site of the torsion, resulting in the appearance of a “bird's beak”.^[1] This bird beak sign, originally applied to the appearance of sigmoid volvulus on conventional

radiographs, can also be appreciated on axial CT images of the loop-type cecal volvulus. Also, the CT scan in our patient demonstrated the typical “coffee bean” sign, that generally refers to an axial view of a dilated cecum filled with air and fluid that may be visualised anywhere within the abdominal cavity.^[5] Another specific CT sign for volvulus is the “whirl sign”, the whirl is composed of spiral loops of collapsed cecum and sigmoid colon. Low-attenuating fatty mesentery with enhancing engorged vessels radiate from the twisted bowel.^[6] In the central eye of the whirl, a soft-tissue density pinpoints the source of the twist. The degree of cecal rotation can even be predicted by the tightness of the whirl. If the acute volvulus is left untreated or the treatment is delayed, bowel necrosis and perforation may occur. In our patient, gangrene had started to develop when the patient was evaluated during surgery. The gangrenous patch was excised, derotation and caecostomy was performed and caecopexy was done. In cases of advanced ischemia, a right hemicolectomy is required; in some cases, primary anastomosis is not possible and stoma formation at both ends is the safest option.^[7]

CONCLUSION

Cecal volvulus is a closed-loop obstruction that may lead to vascular compromise with consequent gangrene and perforation. Early diagnosis and prompt treatment may reduce the high mortality rate reported with it.

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