

**CAECAI VOLVULUS: A RARE CASE OF INTESTINAL OBSTRUCTION**Dr. Supriya<sup>1</sup> and Dr. Vijay Verma<sup>2\*</sup><sup>1</sup>Department of General Surgery, Dr. RPGMC Tanda, Kangra, H.P, India.<sup>2</sup>Department of General Surgery, IGMC, Shimla, H.P, India.**\*Corresponding Author: Dr. Vijay Verma**

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Article Received on 10/02/2021

Article Revised on 03/03/2021

Article Accepted on 23/03/2021

**ABSTRACT**

A twisted loop of the bowel and its mesentery on a fixed point is known as volvulus and the most common site of its occurrence is the sigmoid colon. Caecal volvulus is an uncommon cause of acute intestinal obstruction. It occurs when the caecum detaches from the abdominal wall and twists on itself. This is a case report of a 60 year old female with a diagnosis of caecal volvulus, made during laparotomy procedure, who presented to us with the features of an acute intestinal obstruction. The aim of this report is to emphasize the importance of the diagnosis and appropriate treatment in this rare pathology in abdominal procedures. In this particular case, the patient was benefitted from an early surgical intervention without further complications, as well as an uneventful and smooth postoperative recovery. It is therefore important to acknowledge and consider this pathology during differential diagnosis, and the prompt treatment should not be delayed in patients with caecal volvulus.

**KEYWORDS:** Caecal volvulus, intestinal obstruction, laparotomy.**INTRODUCTION**

A twisted loop of the bowel and its mesentery on a fixed point at the base is known as volvulus, and it may arise in the sigmoid colon, cecum, splenic flexure, and transverse colon, in descending order of frequency.<sup>[1,2]</sup> Caecal volvulus (CV) is an uncommon cause of acute intestinal obstruction. It occurs due to the axial twist of the cecum, ascending colon and terminal ileum around their mesenteric pedicles.<sup>[3]</sup> Caecal volvulus was first described by Rokitansky in 1837 as a cause of intestinal strangulation.<sup>[4]</sup> It accounts for 10–60 % of all colonic volvulus<sup>[5]</sup> and can be divided into two major subgroups: the first is loop axial ileocolic volvulus, which accounts for 90% of cases, and the second is caecal bascule, which accounts for the remaining cases.<sup>[6]</sup> The classic ileocolic volvulus is a clockwise or anticlockwise rotation of the caecum with distal ileum in an oblique pattern. However, the anticlock-type is more commonly seen. In caecal bascule, there is an upward folding of the caecum, either anteriorly or posteriorly.<sup>[7]</sup> It is responsible for approximately 1% of all intestinal occlusions, and has a surgical incidence of 2.8–7.1 cases per year per 1 million people.<sup>[8]</sup> If treatment is delayed, caecal volvulus has a mortality rate as high as 30%.

Etiology and predisposing factors for caecal volvulus include chronic constipation, abdominal masses, late-term pregnancy, previous abdominal surgery, prolonged immobility, high-fibre intake, paralytic ileus, and colonoscopy.<sup>[9-12]</sup>

**CASE REPORT**

A 60year old female was admitted in surgery department with the complaints of pain abdomen and constipation for 1 week. Pain was insidious in onset. Pain was found to be generalized in nature and non radiating type. There was no history of vomiting or weight loss. There was no history of loss of appetite. There was no history of jaundice or fever. Patient had a history of similar complaints 3 months back which got resolved after 1 week of in hospital treatment at a local hospital without any surgical intervention. Patient also had a history of taking anti tubercular treatment (ATT) 3 years back for pulmonary tuberculosis. He also had a previous history of cholecystectomy 25 years back. There was no history of any co morbidity. At the time of presentation, his vitals were stable. On per abdominal examination, abdominal distension and tenderness was present. On digital rectal examination, ballooning was present. Patient was further investigated. His X ray abdomen showed multiple air fluid levels. His complete blood count, liver and kidney function tests came to be within normal limits. His electrolyte levels were also within normal limits. Ultrasonography of the abdomen showed dilated small bowel loops upto 4 cm with inter bowel free fluid in abdomen. A diagnosis of acute intestinal obstruction was made and surgery was planned. Midline laparotomy incision was given. Whole of the small gut loops along with caecum was hugely dilated. However, there were no gangrenous changes. Caecum was found to be mobile and was partially twisted around itself, which was further carefully derotated. Retrograde

decompression was done. Caecum was then fixed to the abdominal wall and caecopexy was done. Patient tolerated the surgery well and the postoperative period

was uneventful. Patient had a smooth recovery and was discharged on eighth postoperative day.





## DISCUSSION

Caecal volvulus is an uncommon cause of acute intestinal obstruction. Etiology and predisposing factors for caecal volvulus include chronic constipation, abdominal masses, late-term pregnancy, previous abdominal surgery, prolonged immobility, high-fibre intake, paralytic ileus, and colonoscopy.<sup>[9-12]</sup>

23–53 % of the patients presenting with caecal volvulus had a history of prior abdominal surgery.<sup>[9]</sup> In our case, our patient also had a history of previous surgery.

It is more common in females of 30-60 years of age. Our patient also belonged to the same age group. It accounts for 10–60 % of all colonic volvulus<sup>5</sup> and can be divided into two major subgroups: the first is loop axial ileocolic volvulus, which accounts for 90% of cases, and the second is caecal bascule, which accounts for the remaining cases.<sup>[6]</sup> The classic ileocolic volvulus is a clockwise or anticlockwise rotation of the caecum with distal ileum in an oblique pattern. However, the anticlock-type is more commonly seen. In caecal bascule, there is an upward folding of the cecum, either anteriorly or posteriorly.<sup>[7]</sup> It is responsible for approximately 1% of all intestinal occlusions, and has a surgical incidence of 2.8–7.1 cases per year per 1 million people.<sup>[8]</sup> It occurs in large and mobile caecum.

Regarding clinical manifestations, patients usually present with severe abdominal pain, distension, constipation, nausea, and vomiting that even could cause hypovolemic shock.<sup>[6,13]</sup> On physical examination, a distended abdomen could be observed. Generalized tympany could be perceived, and a hypoactive or absence of peristaltic sounds could be found. On the other hand, if perforation or gangrene occurs, a patient will present with clinical findings of acute abdominal pain, with signs of peritoneal irritation and hemodynamic instability.<sup>[14]</sup>

In contrast to sigmoid volvulus, for caecal volvulus, abdominal X-ray imaging has limited utility, identifying in some cases air fluid levels and predominant caecum dilatation. CT scan nowadays has an important role, with a sensitivity of > 90% for caecal volvulus. A swirl of mesenteric soft tissue and fat attenuation with adjacent loops of bowel surrounding rotated intestinal vessels, known as the “whirl sign,” is almost diagnostic. Nevertheless, it is only present in few cases of classic volvulus. Regarding caecal bascule, CT scan has a lower sensitivity, and at least 50% of bascule diagnoses are made during exploratory laparotomy.<sup>[15,16]</sup> Although abdominal tomography is more reliable than abdominal radiography,<sup>[17]</sup> in some cases, with the initial radiologic findings, patients could undergo emergency surgery.<sup>[18]</sup>

Regarding the surgical treatment of choice, right colectomy has become the most effective procedure, with the lowest recurrence rates and an acceptable morbidity risk. Alternative procedures such as detorsion with caecopexy, caecostomy, and ileocasectomy are the most common procedures mentioned. When a right colectomy is performed, the performance of a primary anastomosis depends on the hemodynamic conditions and grade of contamination.<sup>[19]</sup>

Point of incidence in this case was the rare cause of the intestinal obstruction of the patient i.e. caecal volvulus, incidence being 1-3%.

### CONCLUSION

Caecal volvulus is not a common cause of colonic obstruction. It has multifactorial etiologies. A diagnosis should be obtained quickly by physical examination and radiological findings. Treatment consists of urgent surgery to diminish the mortality rate.

**Conflicts of Interest:** None.

**Source of Funding:** None.

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