Case Report

Caecal volvulus: a rare entity of intestinal obstruction: 2 cases report

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Received: 09 February 2022
Revised: 04 March 2022
Accepted: 11 March 2022

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ABSTRACT

Caecal volvulus is a very rare cause of intestinal obstruction. Patients with this condition may present with variable clinical presentation ranging from intermittent, self-limiting abdominal pain to acute abdominal pain associated with progressive intestinal ischemia, sepsis, and death. In this report, we presented two cases of caecal twist which was diagnosed with series of radiological imaging and labs. The first patient, 83 years old male underwent caecopexy, appendicectomy, and the second female who was 36 years old underwent right hemicolecction with ileocolic anastomosis. We reported our experience in the management of 2 cases of caecal volvulus in our department.

Keywords: Caecum, Obstruction, Volvulus

INTRODUCTION

The term volvulus is derived from the Latin word ‘volvere’ (to twist). A colonic volvulus occurs when a part of the colon twists on its mesentery resulting in acute, sub-acute, or chronic colonic obstruction.

The embryonic right colon typically has a mesentery that eventually fuses to the parietal peritoneum; this fusion results in adherence to the posterior abdominal wall.1,2 Developmental variations in the degree of fusion lead to the difference in the mobility of the ascending colon and caecum. Hendrick, in a review of cadaver studies, found that 10-25% of the general population had a propensity for caecal volvulus based on the length of the colonic mesentery.3

The long mesentery of the ascending colon results in a mobile caecum. Caecal volvulus is caused by axial twisting of the caecum along with the terminal ileum and ascending colon. It is relatively rare, accounting for less than 2% of all cases of adult intestinal obstruction, while 11% of all volvulus-related intestinal obstructions and incidence is 2.8-7. 1 case per million annually. Caecal volvulus is less common than sigmoid volvulus.3,4 Caecal volvulus occurs more commonly in females and has been reported in all age groups, with an average age of presentation in the fourth decade.5,6,7 In our cases, ages are 36 years, 83 years.

Delayed treatment of caecal volvulus has a high mortality rate of up to 30%. Due to the high mortality rate and potential complications, if there is any clinical suspicion even in a stable patient, early surgical treatment would be recommended as the best approach.5,7

Case 1

A 36 years old female patient was admitted for central abdominal pain associated with four episodes of vomiting and progressive abdominal distension for one day. There was no history of constipation, previous history of such attacks, bleeding per rectum, or something coming out the anus had been observed. General condition was stable, sick looking, dehydrated, and afebrile, without any medical comorbidity.

On examination, abdomen soft, distended mainly in the lower abdomen with localized tenderness/guarding at left iliac fossa/lumbar region and periumbilical area, with no
rigidity, with hypokinetic gut sounds on auscultation. There was an incidental finding of an asymptomatic reducible umbilical hernia (palpable one finger defect in umbilicus). Rest of the hernial orifices was normal.

Laboratory tests revealed leukocytosis with predominance neutrophils. A plain abdominal image showed dilated small bowel loops with air-fluid levels, dilated displaced caecum in the upper left abdomen (Figure 1 and 2). Computed tomography (CT) of abdomen established the diagnosis of caecal volvulus with closed-loop obstruction [Figure 3 (whorly appearance) and Figure 4 (embryo appearance)]. The patient underwent emergency laparotomy for acute intestinal obstruction after resuscitation and optimization. The intra-operative findings were: a counter-clockwise twist at caecum, ileum, ascending colon, markedly distended displaced caecum at left upper quadrant, non-viable, gangrenous caecum, and terminal ileum up to 7-8 cm (Figure 5).

The gangrenous part was resected along with a right hemicolectomy and hand sewed ileocolic end to end anastomosis 3rd post-operative day pt passed flatus and on 4th post-operative day the patient started orally. The post-operative course was uneventful and the patient was discharged on the 5th post-operative day.

**Case 2**

An 83 years male patient known with an old right sided hemiplegia, hypertension, ischemic heart disease, prostatomegaly on medical management, was admitted with a 2 days history of recurrent abdominal pain associated with vomiting and absolute constipation. On general examination, the condition was hemodynamically stable although uncomfortable, and dehydrated.

Clinical examination demonstrated a distended abdomen with hypokinetic bowel sounds and localized tenderness/guarding at the right lower abdomen. There was an incidental finding of left reducible incomplete direct inguinal hernia. All labs (hemogram, renal function tests, and electrolytes) were acceptable. An abdominal radiograph revealed intestinal obstruction with multiple air-fluid levels.

Abdominal CT revealed diffuse dilatation of colonic bowel loops showing multiple air-fluid levels, with a maximum caecal diameter of 10 cm anteroposterior, with progressive mesenteric ischemia, and caecal volvulus. Patient underwent an emergency laparotomy after optimization.

Intra-operatively we found a massively distended viable caecum reaching till right HCR/left HCR with clockwise caecal volvulus and dilated small bowel. Caecopexy with appendicectomy was done. The patient passed flatus on 2nd post-operative day and was started orally from 3rd day, and discharged on 4th post-operative day.
CONCLUSION

Caecal volvulus is rare but is associated with a high mortality rate in sick patients. CT is considered fundamental in the prompt and for accurate diagnosis of caecal volvulus. Early surgery is a rule and right hemicolectomy is the treatment of choice.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: Not required

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Cite this article as: Talreja DP, Chawla RK, Haque PW, Albatanany AA. Caecal volvulus: a rare entity of intestinal obstruction: 2 cases report. Int Surg J 2022;9:1083-5.