



Case Report

Volume 3 Issue 4 – April 2017
DOI: 10.19080/OAJS.2017.03.555617

Open Access J Surg

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Acute transverse colon volvulus with partial rotation



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Submission: April 05, 2017; Published: April 11, 2017

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Abstract

Transverse colon volvulus is an uncommon entity practically very few experienced in their life time. This condition presents most common as emergency with investigation not diagnostic and surgery is the treatment of choice with high mortality and morbidity. This is the first case report of transverse colon volvulus with partial rotation, the following case illustrates and signifies of this condition and outcome in acute abdomen.

Introduction

Transverse colon (T-Colon) volvulus is a uncommon and first reported by Kallu in 1917 [1] and till now 70 paper published till now to our knowledge as per PubMed search. The incidence of colonic volvulus is 3-5 % and T-colon volvulus represents 3-4% out of it [2]. Few of the papers published were in pediatric but it is more common in adult [2-4]. The mortality rates are three times more common in T-colon volvulus when compared to sigmoid or cecal volvulus. We report one case of acute presentation managed with emergency laparotomy.

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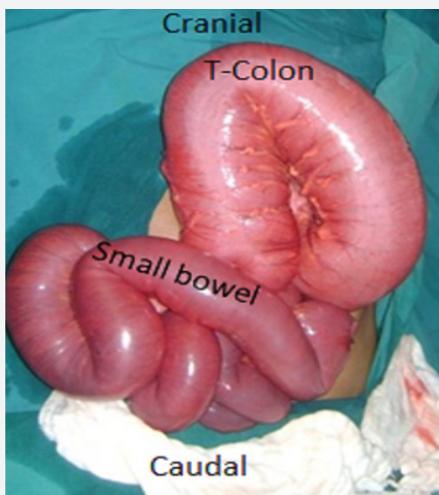


Figure 1: Picture showing intraoperative T-Colon volvulus with dilation of viable colon and dilated small bowel.

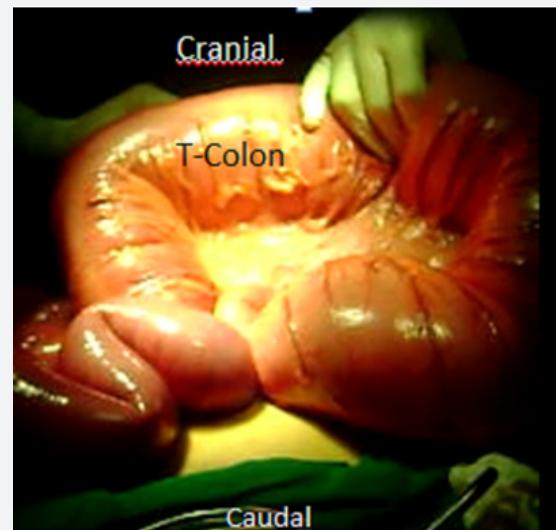


Figure 2: Intraoperative picture showing the axis of rotation of T-colon along the mesentery.

A 35 year male patient presented to emergency department with complaints of abdominal distension, vomiting and obstipation for 48 hours. Physical examination revealed fullness and tenderness throughout, tachycardia and lab investigation revealed leukocytosis. Radiological investigation x-ray was done which showed dilated small bowel and large bowel. Patient was resuscitated and emergency laparotomy was done. Intraoperative there was 180 degree clockwise twist with broad base mesentery with twist at the base of the T-colon mesentery with small bowel dilation, colon was viable (Figures 1 & 2) as the bowel was edematous and dilated resection and double

barrel stoma was done. As patient had sepsis with positive blood culture with E.coli, patient was started on appropriate antibiotics and on post-operative day (POD) 2 patient shifted to ward for conservative management, patient was improving well but on POD 7 patient had onset of dyspnea and febrile spikes so was shifted to ICU and was started antibiotics and vasopressors and nasal oxygenation later needed intubation, stoma was healthy and functioning well till the episode, patient gradually needed increasing doses of vasopressor and on POD 9 died of unresponsive hypotension due to cardiorespiratory arrest caused by unresponsive septic shock.

Discussion

We have described a case of acute T-colon volvulus presented as an acute episode with fulminant colitis and septicemia managed with resection and double barrel colostomy and with postoperative had persistent ileus and on POD 9 died due to unresponsive septic shock and respiratory failure. T-colon volvulus is a rare disease with incidence of 3% reported [2], most of the T-colon occurs in middle age [2], cases of pediatric occurrence have been reported[3]. The cause of T-colon volvulus has been postulated may be due to congenital or acquired. Congenital causes may be due to malrotation of the gut, dysmotility, congenital mega colon, redundancy of the T-colon mesentery, malfixation of the hepatic and splenic flexure's. Acquired causes may be due to previous surgery, cancer, chronic constipation causing elongated mesentery and twisting along the long axis of the T-colon mesentery. There has been reported case of associated clostridium difficile mucositis coexisting infection along with T-colon volvulus [3].

Volvulus of the T-colon presents as acute or chronic form [3,4], with acute form presenting as abdominal pain, vomiting and distention of abdomen presenting in the emergency as intestinal obstruction and fulminant colitis. Chronic form presents as previous episode of abdominal pain and distention with spontaneous reliving, there has been reported 50 percent cases having previous episodes of similar complaints experienced. T-colon volvulus present as closed loop obstruction causing venous impedance and venous congestion and with further twisting may later cause arterial insufficiency causing gangrene.

Diagnosis of T-colon volvulus is difficult to interpret preoperatively as there is no diagnostic imaging to point to the diagnosis. Most of the cases present as large bowel obstruction. X-Ray of the abdomen in some cases may point towards double fluid levels in the epigastrium. In chronic cases inverted coffee bean sign may achieve at diagnosis, but not possible to be done in acute cases. CECT abdomen will show features of large bowel dilatation with no conclusive evidence to diagnosis [5].

Management of volvulus T-colon is surgical management with option of untwisting, untwisting and colopexy [6], resection and primary anastomosis, resection and diversion stoma. Untwisting of colon only will cause recurrence and ideal surgery in redundant colon is resection and anastomosis and diversion stoma depending on the bowel wall condition as our case had edematous bowel , so resection and double barrel stoma was performed to prevent high risk of anastomotic dehiscence. The degree of twist and the direction of twist have not been reported in many cases in the literature, very few reported with 270 degree or 360 degree twist of t-colon volvulus [3,5], but our case had twist of 180 degree anticlockwise and due to the partial twist there was no arterial insufficiency and without gangrenous changes observed. Most of the mortality in T-colon volvulus are high reported of 35% [5] and our case was similar with late presentation with sepsis and fulminant colitis and died due to unresponsive septic shock which was similar to other reported with high mortality [2,7].

Conclusion

T-colon volvulus is a rare entity with diagnosis is often made intraoperative and resection of the bowel is the ideal procedure and postoperative will be stormy course with prolonged ileus and with high morbidity and mortality.

Conflict of Interest

Author declare no conflict of Interest, no funding obtained for the article

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DOI: [10.19080/OAJS.2017.03.555617](https://doi.org/10.19080/OAJS.2017.03.555617)

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