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Case Report

Double Trouble- Simultaneous Double Obstruction of Small and Large Intestine Due to Double Volvulus - A Rare Entity

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Abstract

There have been to the best of our knowledge few reported cases Double volvulus in the literature relating to this topic. It has been long considered an unlikely differential in cases of acute abdomen presentations. However with our case report we would like to state that having two surgical emergencies simultaneously in a single patient is not that uncommon as well as the fact that even with an obvious diagnosis or pathology in mind we should, after laparotomy, perform a thorough search for any other possible sources of malady with keen inspection.

We report a case of double volvulus of the small and large bowel in a young female presenting with signs of peritonitis. The clinical presentation was of generalised peritonitis and radiological features of bowel obstruction. This sort of presentation can be a cause for acute abdomen, more commonly than expected, sometimes with idiopathic causes and can be the cause on rapid onset gangrene in patients if not adequately and expeditiously identified and rectified.

Keywords: Double Volvulus; Sigmoid Volvulus; Ileal Volvulus; Gangrene; Resection; Ileostomy

Presenting complaints

A 39 year old woman presented to the Emergency with complaints of pain in abdomen with distension, not having passed stools or flatus for 3 days. She reported multiple episodes of vomiting and nausea with the inability to pass flatus. She gave history of chronic constipation. She had no significant medical/drug or surgical history. No recent history of loss of weight. She had loss of appetite. No family history of cancers.

Examination revealed a young woman in dehydration and painful distress. Her vitals signified tachycardia of 124 beats per minute and hypotension of 90/62 mm of Hg with visible signs of dehydration. Inspection of the abdomen revealed a markedly distended abdomen with severe tenderness to palpation throughout the abdomen with guarding of the entire abdominal area. Bowel sounds were absent. Digital Rectal Examination showed collapsed rectal walls, empty rectum and no other palpable masses.

Investigations

- Full blood count and electrolytes were within normal range.
- Chest X-Ray showed was normal
- Abdominal X-Ray showed typical large dilated loop of colon with loss of haustra forming closed loop obstruction and the whirl sign denoting large intestinal volvulus most probably sigmoid volvulus.

Differential diagnosis

Diagnosis was bowel obstruction due to sigmoid volvulus

Treatment

The patient was resuscitated and taken for emergency exploratory laparotomy. Findings included distended bowel loops with a sigmoid volvulus and the loops of the small intestine particularly the ileum forming knot centrally, within the sigmoid volvulus loops, undergoing twisting in turn around their own axis. The bowel had undergone necrosis and was black. There was sequestered offensive smelling dark coloured fluid throughout abdomen cavity but no site of perforation in sight. This may signify the transudate from the gangrenous bowel segments having collected in the abdominal cavity over days and undergone sequestration forming fluid filled pockets throughout the abdominal cavity. The necrosed bowel segments were untwisted, necroses segments duly identified, resected and a colo-colic anastomosis with an end ileostomy was performed for the patient.

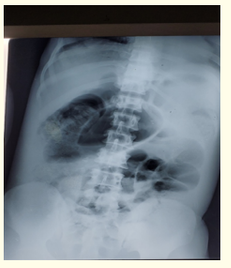


Figure 1: Abdominal X-ray showing large dilated loop of colon with loss of haustra, denoting large intestinal volvulus most probably sigmoid volvulus.

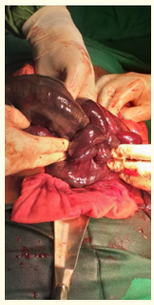
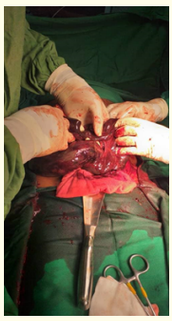


Figure 2: Intra-op photos showing gangrenous large and small intestine.



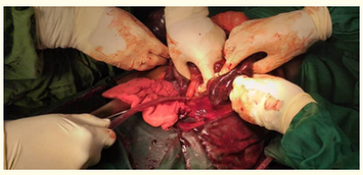


Figure 3 and 4: Intra-op photos showing the untwisting and separation of the large and small intestinal segments to demarcate between gangrenous and non-gangrenous segments for resection.

Outcome and follow-up

Post operative period was uneventful. Her ileostomy was moving well. Wound was healthy and healing well. She was started on normal diet. She was tolerating her feeds well. Patient was discharged after 10 days.

Discussion

Volvulus is the twist of part of bowel along its mesentery. The word comes from its Latin counterpart 'Volvere' which means 'to twist'. This can result in arterial or venous compromise and therefore partial or total gangrene and obstruction of bowel. This being a potentially fatal condition we need quick as well as accurate diagnosis and intervention to prevent fatal condition.

Volvulus is an uncommon cause of obstruction in itself accounting 5% of cases with most common site being the sigmoid colon and double or simultaneous/synchronous volvulus involving both the small and large bowel is extremely rare. The entity is more common in Africa, Asia and the Middle East [3]. Compound volvulus is common in the third to fifth decades of life [4]. Our patient falls into this category though the cause is idiopathic in her case. Some potential causes mentioned in past literature would be a long mesentery with a narrow base and as in the case of this patient she gave on and off history of fasting with ingestion of bulky foods after it which may be a presumable predisposing factor in her case. Malrotation, Internal herniations, post-operative volvulus due to adhesions and Meckels diverticulum in the young may be some other causes.

Compound Volvulus classification has two types based on location and the correlation to mortality.

Our patient belongs to the Type II Class 6 compound volvulus which was potential for higher mortality risk rates [1,2].

Clinical presentation was typical of dehydration, vomiting, abdominal pain and distension [1]. Patients may have rectal bleeding [2]. Fever may be present with gangrene. Patient is usually in toxic distress and dehydrated. Bowel sounds may be hypoactive for absent our sometimes hyperactive and the rectum empty.

Prompt resuscitation with fluids, nasogastric intubation, catheterizarion for urine output monitoring and antibiotics are to be started immediately. An emergency laparotomy performed with the gangrenous segments resented and a stoma done with stoma reversal at a later stage when the condition of the patient is stable [1,2]. Anastomosis is usually avoided as the patient is usually in shock or unstable and the abdominal cavity may be contaminated by bowel contents which can affect healing of anastomosis. For non-gangrenous cases, untwisting in anticlockwise direction and mesopexy or sigmoidopexy may be done. Mesoplasty may be another option to be considered in certain cases [1,2].

Prognosis is based on prompt diagnosis and intervention. Mortality rate is 6 to 8% in non-gangrenous cases and 20- 100% in gangrenous cases [2] Shock can be the cause of death in most cases.

Conclusion

Compound or Double Volvulus though rare may present in our clinical settings with perforation or peritonitis like features. The mortality is due to rapid progressions to gangrene and shock. Proper resuscitation, antibiotic coverage and emergency laparotomy are key to survival and positive outcomes.

Conflict of Interest

None declared.

Bibliography

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