Sigmoid Volvulus

Case Reports

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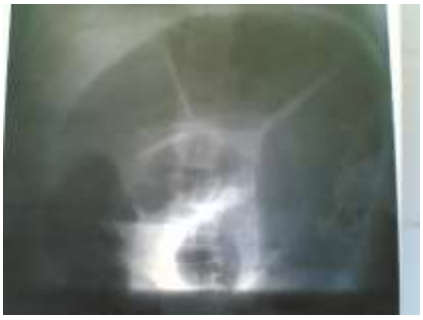
ABSTRACT

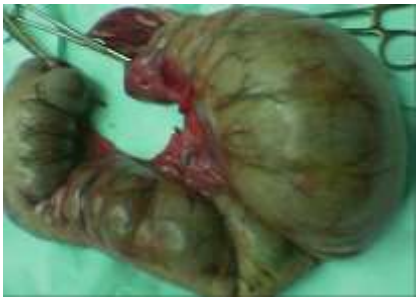
Volvulus is a rare cause of large bowel obstruction in our population. It is more common in elderly as compared to young adult patients. Here we report a 25 year old male patient who had volvulus of the sigmoid colon ,treated by primary resection and end to end anastomosis because the sigmoid colon was gangrenous .

Volvulus is defined as a twisting of a loop of intestine around its mesenteric attachment site 1 (Latin Volvere , to roll) 2 .
Volvulus can occur at various sites of the gastrointestinal tract , but the commonest site is the sigmoid which is involved in 90% of cases 3.
Volvulus of the colon causes large bowel obstruction in 5-10 % of patients 4.
Sigmoid volvulus is common in elderly as compared to young people 5 ,and has a high prevalence in South America , Africa , and parts of Asia with slight male preponderance 5.

Case Report

A 25 year old man was presented to the emergency department with complaints of severe abdominal pain , vomiting , complete constipation and abdominal distension for one day duration ,actually the symptoms follow a heavy meal.
Examination of the patient revealed generalized tenderness , rigidity ,absent bowel sounds and marked abdominal distension .
The plain abdominal radiograph showed large bowel obstruction , the bent-inner
Tube sign and coffee-been sign (figure 1)





\Figure 1 ,plain abdominal Figure 2,volvulus of the Figure 3,resected

\Figure 1 ,plain abdominal radiograph of the patient showing the distended sigmoid colon ,bent inner tube sign ,and the coffee been sign.

The laboratory investigations including CBC ,electrolytes, and renal function tests were with in the normal range .The provisional diagnosis was sigmoid volvulus.
During laparotomy ,a hugely dilated twisted and gangrenous sigmoid colon was delivered easily (figure 2,and 3)
.
The operative procedure involves on table colonic lavage ,primary resection of the sigmoid colon and end to end anastomosis .The other parts of the colon are not enlarged .During the postoperative period the patient is well improved and discharged in good healthy state.

Discussion

Abdominal radiograph are usually diagnostic 5 and reveals severe colonic dilatation involving the sigmoid without gas in the rectum 5,6,8.The dilated colon usually lies in the right hypochondrium which also may elevates the diaphragm ,and the limbs taper inferiorly towards the pelvis 3,5,giving the appearance of bent inner tube or inverted U-shaped structure 5.The colonic haustra are lost 4,5,and air-fluid level may be seen. Radigraphically the coffee bean-shaped sign results from the edematous and contiguous walls forming a dense white line which surrounded by the curved and dilated gas-filled lumen 5.6. Bird's beak sign is shown by a single-contrast barium enema 4,5, in which case care is needed to avoid barium in suspected gangrene &perforation but instead gastrografin enema can be used.

CT scan will reveals the whirl sign representing torsion on the tightly twisted mesocolon by the two limbs of the involved colon 5.

The treatment of the acute sigmoid volvulus is a surgical emergency which require immediate resuscitation with intravenous fluid ,correction of electrolyte disturbance and administration of analgesia 6.Early reduction via either a rigid sigmoidoscope or a fibre optic colonoscope is successful in 80 % of patients 3,6, were an anorectal tube may be inserted to maintain decompression 3,4,5.The advantage of the flexible colonoscopy is it can detect a higher location of torsion which is higher than the limit of the sigmoidoscope ,and reveals mucosal aspect for any evidence of vascular compromise 6 .Nonoperative reduction has a high recurrence rate 3,4,6, and elective resection of the sigmoid colon

There are many risk and predisposing factors which include long sigmoid loop with narrow mesentery allowing for torsion 3,4,6 ,mega colon 3,5 ,high fiber diet 4,5,6, chronic constipation 3,5,6,chronic usage of laxative ,institutionalized elderly patients with a previous history of chronic dysmotility 5,6,and chagas`disease especially in South America 4,5,6.Endemic areas of round worm infestation has increased incidence of volvulus in children 5. Concomitant mega colon and mega rectum are significant predictor of recurrence if not treated as well 7.

The usual presentation of the affected patient include colicky abdominal pain 4,5,6,8 ,chronic constipation 5,6,8,increased abdominal distension 3,4,5,6,8, and vomitting3,5

Patient examination may reveals tenderness 3,tympanic abdomen 5,and tinkling bowel sound can be heard initially 6 but vanish with secondary ileus or perforation 6 which may leads to fever and shock. A palpable mass may be present 5.

should be scheduled in good risk patients especially in the youngs to reduce the recurrence rate 4,5 .Urgent surgery is required if strangulation is required if strangulation is suspected 3,6, or if the nonoperatve decompression is unsuccessful 4,5,6.The nonviable colon is resected with an end colostomy and a mucous fistula or Hartmann`s closure of the distal end 3,6 .If the color is viable a resection with a primary anastomosis can be done 6.

The mortality rate is more than 50% if the involved colon is gangrenous and 10% in the nongangrenous colon 6 .Total abdominal colectomy should be considered if the entire colon is a megacolon 4.

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