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Case Report

Surgery Section

Volvulus of Sigmoid Colon During Full Term Pregnancy with Rectovaginal Fistula: A Case Report

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ABSTRACT

Intestinal obstruction due to sigmoid colon volvulus during pregnancy is a rare complication but associated with significant fetomaternal mortality. We describe a case of sigmoid volvulus in a patient with 37 wk pregnancy causing huge dilation of left colon. Patient developed rectovaginal fistula following nonmedical method to relieve distention by inserting stick as told by patient.

Keywords: Pregnancy, Rectovaginal fistula, Sigmoid volvulus

CASE REPORT

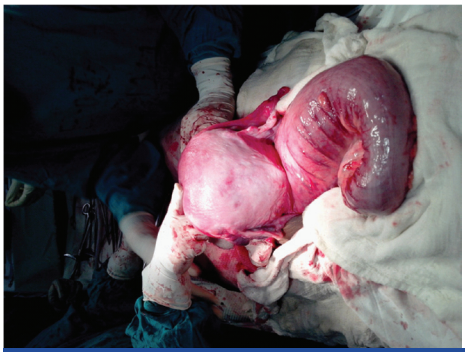
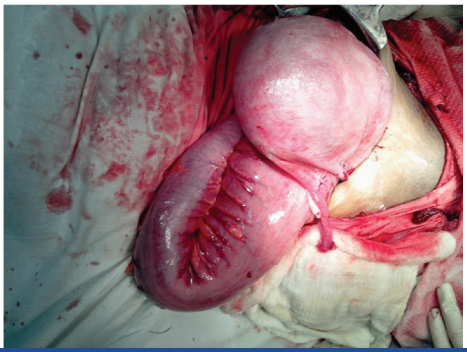
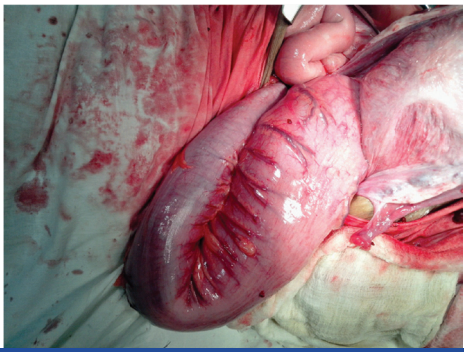
A 42-year-old lady with 37 wk pregnancy, admitted to the emergency room with complains of abdominal pain over last three days, with progressive worsening despite use of medications. There is no history of such complains before in course of pregnancy but occasionally patient felt mild abdominal discomfort which relieved by defecation otherwise patient did not complaint of any kind of altered bowel habits.Some local method of putting stick per rectum was tried on the patient by quack. The patient did not have family history of complications of mega colon. On physical examination, patient was febrile and dehydrated, with signs of shock. She was having severe respiratory distress. The abdomen was asymmetrically distended and it was more prominent on left flank. No bowel sounds were present. Obstetric examination showed that fetal heart sound was present but non stress test was positive. On vaginal examination, fecal matter was coming per vagina noticed by examiner. Patient did not give history of passage of fecal matter per vagina. Cervix was located in a mid-posterior position, without dilatation. Per rectal examination revealed tear in anterior wall of rectum which is extending up to posterior vaginal wall. Proctoscopy was suggestive of tear in anterior rectal wall with dimensions of approximately 1.5 cm^2, rent was continuous with posterior vaginal wall.

Routine laboratory examination results were normal except for an elevated white blood cell count of 13000. Ultrasonography of the abdomen and pelvis confirmed single full term intra uterine fetus with normal cardiac activity and presence of mild amount of free fluid in the abdominal cavity.

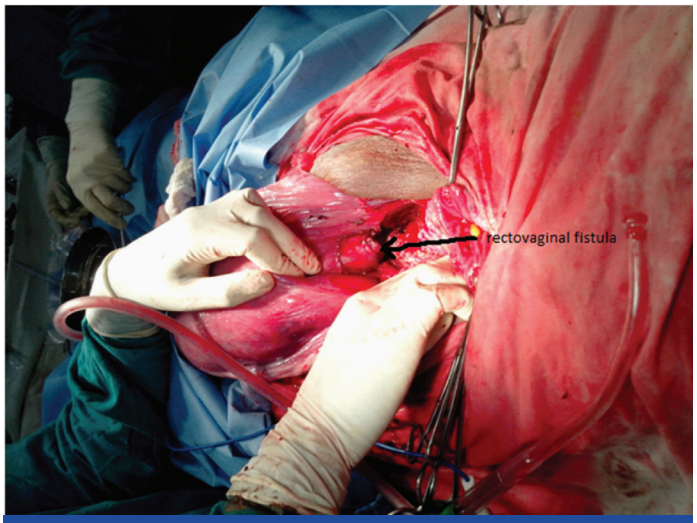
Patient was submitted to initial resuscitation with IV fluids, nasogastric suction, and foley's catheter. After initial resuscitation, suspecting bowel obstruction complicated by SV with rectovaginal tear, patient was taken for emergency exploratory laparotomy under general anaesthesia. The abdominal cavity was accessed by midline incision and after opening the peritoneum intense distension of loops of colon was found [Table/Fig-1]. The colon was posteriorly displaced by the pregnant uterus, without signs of perforation [Table/Fig-2,3]. As patient conditions were critical, it was decided to carry out a concomitant cesarean section. Live fetus was delivered and handed over to paediatrician. Uterine cavity was closed in layers. After mobilization of sigmoid colon and rectum, it was found that there was rectovaginal tear which was repaired in layers [Table/Fig-4,5]. Sigmoid colon with its lax mesentery was excised and colostomy was performed. The rectal stump was closed with mechanical suture below the peritoneal reflection. She was discharged on 9th postoperative day. Colostomy was closed by colorectal anastomosis after three and half months.

DISCUSSION

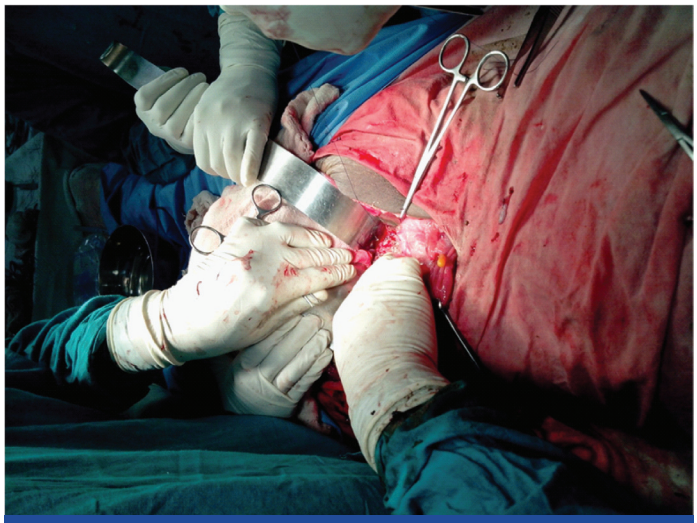
Sigmoid Volvulus (SV)mostly occurs in chronically illpatients who have long redundant sigmoid colon. A high incidence has been reported in some geographical areas due to high prevalence of chagasicmega colon (South America) and higher-fiber diet (Africa and India) [1]. SV is the most common cause of intestinal obstruction during pregnancy, accounting for 25% to 44% of the cases because the enlarging uterus can cause a redundant or abnormally long sigmoid colon to rotatea round its point of fixation on the sigmoid mesocolon or the pelvic side wall and should always be considered as one of the cause of acute intestinal obstruction during pregnancy [2].The classical signs of acute obstruction such as vomiting, distention, and obstipation may not be obvious during pregnancy. Abdominal pain due to obstetric causes may mimic intestinal obstruction and can make diagnosis difficult. The plain abdominal roentgenograms

[Table/Fig-1]: Uterus posterior surface and dilated sigmoid after caesarian section **[Table/Fig-2]:** Uterus and sigmoid volvulus: anterior view
[Table/Fig-3]: Dilated sigmoid colon after retraction of uterus



[Table/Fig-4]: Injured part of rectum and vaginawith rectovaginal fistula



[Table/Fig-5]: After repair of rectum and vagina

demonstrate typical patterns of obstruction in 80–91% of the cases, showing the characteristic "horseshoe" sign. A detailed ultrasound examination usually confirms the presence of free fluids in the abdominal cavity, and viability of the fetus. Magnetic resonance imaging is also proposed to be effective tool [3]. Reluctance to obtain radiological evaluation in pregnancy may contribute to diagnostic delay. The patient present in this report sought emergency medical care with sign and symptoms of acute intestinal obstruction with huge distention of sigmoid and descending colon. The management of SV in the pregnant patient involves aggressive fluid resuscitation and early surgical decompression of proximal bowel [4]. In the absence of peritoneal signs or mucosal ischemia, detorsion and decompression via sigmoidoscopic placement of a soft rectal tube or through a flexible sigmoidoscope or colonoscope can be tried till delivery of a viable infant [5]. Although,colonoscopic detorsion is often successful in nonpregnant patients, success in late pregnancy is rare. This could probably be due to the large gravid uterus acting as a mechanical impediment to detorsion. After fetal maturity, cesarean section and subsequent sigmoid fixation can be done. Laparoscopic sigmoidectomy or sigmoid fixation has been recommended during pregnancy or after child birth [6]. Emergency laparotomy through midline incision and resection of unhealthy bowel with a diverting colostomy is the usually performed surgery in these cases. In most cases, the surgeon prefers resecting all necrotic bowels, exteriorizing the proximal colon as a terminal colostomy, and closing the distalrectum (Hartmann's procedure) while other prefer to perform a primary anastomosis with or without colonic cleansing intraoperatively when there is no contaminationof the peritoneal cavity [7]. However, primary anastomosis of an unprepared distended paretic and edematous colon is generally avoided as it could be hazardous to both mother and fetus [8]. In our case, combination of above two approaches was performed because of associated rectovaginal injury. We repaired rectum and vagina and proximal to that colon was closed and proximal portion of sigmoid was taken out as end colostomy after resecting unhealthy part of sigmoid colon. Hence, in full term pregnant patients with satisfactory clinical condition andwithout signs of ischemic complications in abdominal cavity, cesarean section can be performed first followed by resection of nonviable intestinal segment.

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