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Case Report

A rare case of sigmoid volvulus complicating pregnancy in a Tertiary care centre: a case report

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ABSTRACT

Intestinal obstruction complicating pregnancy is an extremely rare complication during pregnancy. Volvulus of the sigmoid colon is the most common cause of intestinal obstruction complicating pregnancy accounting for upto 44% of the aetiology. We report a case of sigmoid volvulus complicating pregnancy in a woman with 34 weeks amenorrhoea which was diagnosed early in spite of its late presentation and successfully managed with resection and primary anastomosis. Sigmoid volvulus complicating pregnancy carries a high maternal mortality and morbidity, fetal mortality and needs a high index of suspicion and early surgical intervention.

Keywords: Sigmoid colon, Volvulus, Pregnancy

INTRODUCTION

Sigmoid volvulus complicating pregnancy is a rare complication. Since 1885 only 100 similar cases have been reported.¹⁻³ The physiologic symptoms of pregnancy may cloud the clinical picture.^{1,4} Sigmoid volvulus complicating pregnancy is an acute surgical emergency which if not intervened immediately carries a high maternal and fetal mortality and morbidity.^{1,4,5} Laboratory findings are not diagnostic and there is hesitancy in ordering radiological investigations during pregnancy.^{1,6,7} Ultrasonogram may be of help to some extent in the management.⁸ The treatment requires a multidisciplinary approach and surgical intervention is frequently needed.^{1,8,9} The prognosis of sigmoid volvulus during pregnancy is poor.^{1,4,5} Here in we report a case of Sigmoid volvulus complicating pregnancy in a woman with 34 wks of amenorrhoea which was diagnosed early in spite of its late presentation and successfully managed with resection and primary colorectal anastomosis.

CASE REPORT

A 28 year old primigravida with 34 weeks gestation of an otherwise uneventful pregnancy presented in labour ward causality with complaints of abdominal pain with progressive worsening for the past three days, increasing constipation for three days followed by obstipation for one day and abdominal distension for two days. On physical examination, the patient was febrile, dehydrated, tachypnoeic, tachycardia and hypotension were present with respiratory distress. The abdomen was hugely distended with tenderness, guarding and rigidity with absent bowel sounds. The obstetric examination revealed the uterus to be irritable with fetal heart sounds present. Per vaginal examination revealed a bishop's score of 3/15. Ultrasonogram showed an intra-uterine viable pregnancy with placenta in upper segment. Laboratory investigations was Hb 10g%, urea 39mg%, serum creatinine 1.2 mg%, liver function tests normal, serum electrolytes showed acidosis and there was leucocytosis. Plain X-Ray Abdomen revealed dilated gas filled bowel loops. Chest radiographs showed bilateral pneumonitis. Surgeon opinion obtained. Per rectal examination

revealed rectum to be empty. After initial aggressive resuscitation patient taken up for emergency laparotomy under general anaesthesia with grade IV- E risk.

Peroperatively sigmoid volvulus was seen behind the pregnant uterus (Figure 1). As sigmoid volvulus was found to have undergone ischemic necrosis and non-viable (Figure 2), resection of sigmoid colon was done and primary end to end colorectal anastomosis was performed. Peroperatively 2 units of packed cell transfusion given. Postoperatively patient monitored in intensive care unit and under mechanical ventilation for one day. Broad spectrum antibiotics, antenatal steroids and micronized progesterone were given 48 hours after surgery patient went into labour and delivered an alive preterm female baby 1.7 kg which was admitted in NICU. The patient had an uneventful recovery and discharged safe on tenth postoperative day.



Figure 1: Pregnant uterus with sigmoid volvulus.



Figure 2: Volvulus necrotic, non-viable.

DISCUSSION

The incidence of intestinal obstruction during pregnancy is around 1:1500 to 1:66431 cases.^{1,5} The sigmoid volvulus is the most common cause of intestinal obstruction during pregnancy accounting for 25% to 44% of cases.^{1,5,6,10} The mechanism of sigmoid volvulus in pregnancy has been suggested to be due to the

displacement of an abnormally mobile sigmoid colon by the enlarging uterus that rise out of the pelvis and can twist around its fixation of point on the sigmoid mesocolon or the pelvic side wall.^{11,12} There is an increased incidence of sigmoid volvulus in the third trimester around 66%.^{1,5,6,9,10} The typical symptoms of Sigmoid Volvulus in pregnancy known as SV Triad are intermittent and severe abdominal pain, distension and obstipation and the common signs are abdominal tenderness, distension, akinetic bowels sounds and empty rectum.^{1,4,6,9} These typical signs and symptoms though were present in our case, but was thought to be due to pregnancy and hence ignored by the patient. The laboratory findings are not pathognomonic in Sigmoid Volvulus during pregnancy.^{1,6,7} Plain X-ray abdomen showing a horse shoe pattern or coffee bean pattern, carries a risk of radiation to the foetus 0.1 to 0.3 rads.^{1,13} Nevertheless, a nonspecific clinical diagnosis of intestinal obstruction is generally made as was in our case. A definite diagnosis is possible only by MRI or flexible endoscopy.¹⁴⁻¹⁷ Abdominal and obstetric ultra sonography provides information about the foetus and eliminates or pathologies like Abruption Placenta, Appendicitis, Cholelithiasis, Acute Pyelonephritis to some extent.^{1,8}

The management of Sigmoid Volvulus in pregnancy requires a collaboration of general surgeons, obstetricians and neonatologists.^{1,8,9} The patient should be managed in an intensive care unit with aggressive fluid resuscitation, broad spectrum antibiotics with ventilatory support if the patient is in multiple organ dysfunction as in our patient. Recognition of this entity as an acute surgical emergency and de-compression of proximal bowel is the sine qua non in preventing maternal mortality.^{5,18} The surgical methods can be colonoscopic detorsion, resection of the nonviable colon and colostomy or end to end anastomosis. Flexible colonoscopic detorsion is difficult in late pregnancy due to mechanical impediment by gravid uterus, but successful detorsion can be performed in non-gangrenous sigmoid volvulus of pregnancy.^{1,9,17}

When an emergency surgical intervention is required in patients with sigmoid volvulus complicating pregnancy in third trimester, a standard midline incision allows maximal exposure with minimal uterine manipulation.¹⁹ Usually ischaemic or necrotic bowel is resected, exteriorizing the proximal colon as a terminal colostomy and closing the distal rectum (Hartmann's procedure).²⁰ Resection and primary colorectal anastomosis as in our patient is a safe approach with distinct advantage of reduced hospital stay and avoidance of further surgery.^{1,9,19,21} The use of tocolytics and steroids for fetal maturity has to be individualized. When the fetus is alive the surgeon should try to preserve the integrity of the uterus and allow vaginal delivery as in our case.²² Emergency LSCS in the presence of multiple organ dysfunction and septicemic shock can develop severe postpartum haemorrhage with 67.7% mortality which may lead on to hysterectomy and puerperal sepsis.²³ After surgery the patient may need intensive care in ICU with

ventilator support because of ARDS as in our patient.²³ Early suspicion together with prompt intervention with primary anastomosis will minimize maternal/fetal mortality and morbidity as in our patient.^{1,9,19,21}

CONCLUSION

Diagnosis of sigmoid volvulus in pregnancy is a challenge, but a delay in diagnosis increases the rates of foeto-maternal mortality. Studies have shown that in sigmoid volvulus complicating pregnancies the prognosis is poor with 12 to 24% maternal mortality and 20 to 26% foetal mortality. A high incidence of clinical suspicion and timely surgical intervention are the key to a favourable outcome.

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