

SIGMOID VOLVULUS IN PREGNANCY

Greeshma Devi J^a, Preet Agarwal^a, Usha Vishwanath^a

ABSTRACT:

Sigmoid volvulus complicating pregnancy is an extremely rare complication with fewer than 83 cases reported in literature. We report a case of sigmoid volvulus complicating pregnancy. The sigmoid colon was resected and Hartman's colostomy was performed. Aggressive

resuscitation followed by early surgical intervention should be undertaken to reduce maternal and fetal morbidity and mortality.

Key Words: Sigmoid volvulus, acute abdomen in pregnancy, Intestinal obstruction.

SRJM 2010;3:34-36

INTRODUCTION:

Intestinal obstruction is a rare but serious complication of pregnancy with significant maternal and fetal mortality. Only 83 cases of sigmoid volvulus during pregnancy have been reported the first of which was reported in 1885. Only four cases have been reported since 1985, with the most recent by Alshawi in 2005⁽¹⁾. It is a condition that poses significant risk to both mother and fetus requiring a management strategy that varies with each trimester. The complications for the mother if not intervened in time are perforation, peritonitis and sepsis. Complications to the fetus are preterm delivery, intrauterine death and neonatal sepsis. Accurate timely diagnosis and immediate intervention are required to prevent complications to the mother and the fetus. The following is a case report of sigmoid volvulus complicating pregnancy.

CASE REPORT

A 25 year old primigravida at 27 weeks + 3 days gestational age presented with colicky abdominal pain and unable to perceive fetal movements for 1 day, associated with abdominal distension, vomiting – non bilious containing food particles and obstipation. She had no past medical or surgical history and her menstrual and antenatal history were uneventful.

On examination abdomen was distended, tense and tender, fundal height corresponded to 28 weeks size, bowel sounds absent, fetal heart sound were well heard. Per vaginally cervical os closed. Per rectum - empty and ballooned out rectum.

Plain X ray of the abdomen showed a large distended loop of bowel in the upper abdomen and ultrasound of the abdomen showed moderate ascitis in the perisplenic region and a gravid uterus with a single live intrauterine gestation corresponding to 31 weeks.

With the clinical suspicion of acute intestinal obstruction patient was taken up for laparotomy. Intra operatively

findings were a grossly dilated gangrenous sigmoid colon (figure 1) twisted at the pedicle and the whole sigmoid was pushed to the right by the gravid uterus. (Figure 2) Bowel was resected and a Hartmann's colostomy was performed (figure 3 and 4). Patient was started on oral fluids on the 3rd postoperative day and was on terbutaline tocolysis and broad spectrum antibiotics. As she was tolerating solid foods well, she was discharged with a colostomy. Patient was followed up regularly. She was admitted one month later with inability to pass feces through colostomy. This had improved with administration of laxatives.

Gangrenous sigmoid colon



Fig 1 : Gangrenous sigmoid colon on laparotomy

Sigmoid Colon

Gravid Uterus

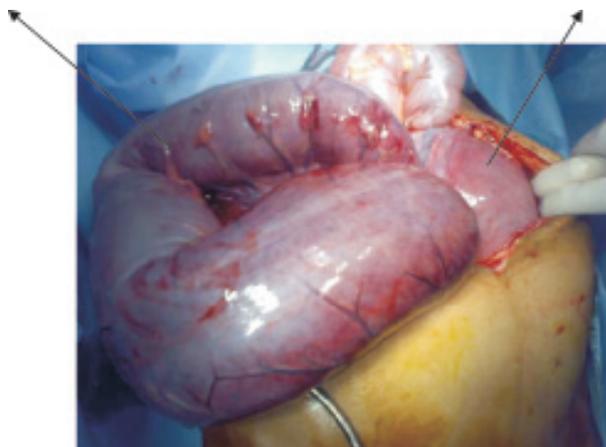


Fig.2 : Sigmoid colon pushed to the right by the gravid uterus

CORRESPONDING AUTHOR :

Dr. GREESHMA DEVI J

Department of Obstetrics and Gynaecology
Sri Ramachandra University
Porur, Chennai - 600 116
Email : greeshma_26@yahoo.co.in

^a Department of Obstetrics & Gynaecology

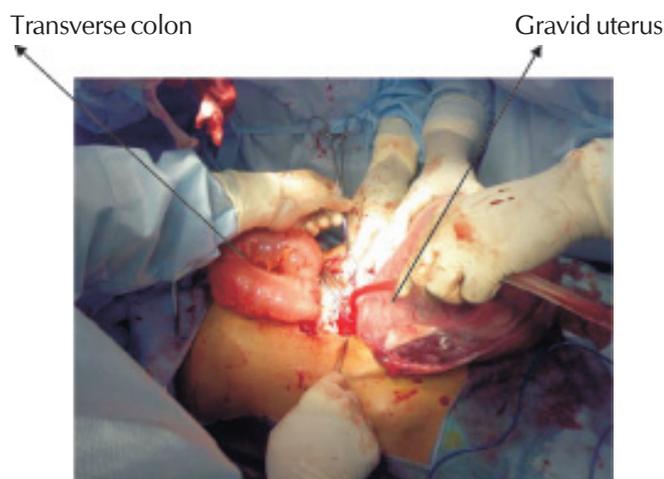


Fig. 3 : Hartmann's Colostomy being performed

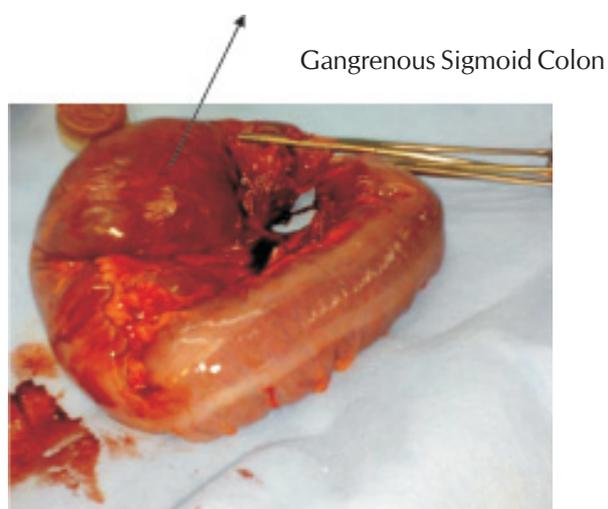


Fig. 4 : Resected Sigmoid Colon

At 36 weeks of gestation patient presented with eclampsia and emergency lower segment cesarean section was performed and a live 3.6 kg boy baby with an APGAR of 8/10, 9/10 was delivered. Intraoperatively and postoperatively there were no complications. Baby and mother were discharged on the eighth postoperative day after the patient's blood pressure was normalized. Colostomy closure was planned 3 months later. Patient was admitted 3 months later and a colostomy closure was done. The patient had an uneventful postoperative period and was discharged. The patient is being followed up regularly.

DISCUSSION:

Intestinal obstruction is very rare occurrence in pregnancy with the incidence varying between 1 in 1500 and 1 in 66,431^(2,3,4) and sigmoid volvulus is the commonest type of intestinal obstruction in pregnancy accounting for 44% of the cases^(2,4).

A retrospective review of 66 cases of intestinal obstruction complicating pregnancy and the puerperium revealed that the most common causes of mechanical obstruction were adhesions (58%), volvulus (24%), and intussusceptions (5%)⁴. In these patients 77% had a previous

history of abdominal or pelvic surgery. Abdominal pain was present in 98%, vomiting in 82%, and tenderness to palpation in 71% and in 82% obstruction was evident on radiographic evaluation. Gangrenous bowel requiring resection was present in 23% of patients⁽⁵⁾. Thirty-eight percent of patients completed term pregnancies after operative resolution of obstruction; total maternal mortality was 6%, and total fetal mortality 26%⁽⁴⁾. Admission, detection – Laparotomy interval was 48 hours. In a statistical analysis of 78 cases of volvulus during pregnancy three cases were primigravidas, 12 were multigravidas and the others did not report parity. This suggests that multiparity may predispose volvulus probably due to relaxation of abdominal musculature.⁽⁶⁾

Most of these cases occur at term when the abdomen is distended maximally by the pregnant uterus. The possible explanation for sigmoid volvulus to occur in pregnancy is that the enlarging uterus pushes the long redundant colon out of the pelvis and twist around its point of fixation on the pelvic side wall. Torsion may vary from 135-800° with a greater incidence in the clockwise direction.

The reluctance to do radiologic examination in pregnant women and pregnant state clouding the clinical picture most commonly causes a delay in the diagnosis of the condition. Pregnant women who present with this condition present very late where there is already considerable harm done to the mother or the fetus or both. Most of these patients come with an intrauterine death or in preterm labour with good cervical dilatation. High index of clinical suspicion is very important in cases of intestinal obstruction. Early diagnosis and prompt intervention prevents morbidity and mortality to the mother and the fetus. The differential diagnosis of Abruption Placenta which presents with similar features of a tense and tender abdomen should be considered. The other differential diagnosis are preterm labour and appendicitis as they present similarly with abdominal pain. The ability to make the right diagnosis is very important as the management is completely different for the three above mentioned differential diagnosis.

Treatment of this condition varies according to the trimester of pregnancy during which the patient presents. If there is evidence of gangrene or peritonitis the definitive treatment is sigmoid colectomy and Hartmann's procedure. If there is no evidence of peritonitis or gangrene in the first trimester decompression and detorsion and Sigmoidopexy can be done⁽²⁾ but recurrence is high⁽¹⁾ and may require a sigmoid colectomy in the second trimester (as miscarriage rates are lesser). If asymptomatic with conservative treatment then surgery is postponed till after delivery.

Labour can be induced once the baby is appropriately grown. Therefore Sigmoid volvulus is not an indication for Caesarean section. There are reports of patients who delivered vaginally at 38 weeks⁽¹⁾. Caesarean section is indicated for medical complications concurrent with pregnancy.

Post delivery the colostomy can be closed using a single layer or double layer technique after about 3-6 months.

CONCLUSION :

Sigmoid volvulus in pregnancy is an extremely rare entity with significant maternal and fetal morbidity and mortality. Timely diagnosis and a balanced approach to judging the benefits versus the risks to both the mother and fetus would lead to improved survival and decreased morbidity. Reluctancy of radiological diagnosis in view of pregnant situation should be avoided and appropriate management rationalized.

REFERENCES:

1. Alshawi JS "Recurrent sigmoid volvulus in pregnancy: report of a case and review of the literature. *Dis Colon Rectum* 2005; 48(9):1811-3.
2. Sunil K.Lal , Ricardo Morgenstern, Elango P. Vinjirayer, Ayaz Matin "Sigmoid Volvulus an Update" *Gastrointest Endoscopy Clin N Am* 2006;16:175-187.
3. Lord SA, Boswell WC, Hungerpiller JC "Sigmoid volvulus in pregnancy" *Am Surg* 1996 May; 62(5): 380-2
4. Ballantyne GH, Brandner MD, Beart Jr RW, et al "Volvulus of the colon: incidence and mortality" *Ann Surg* 1985; 202:83-92
5. Perdue, PW, Johnson, HW, Jr, Stafford, PW "Intestinal obstruction complicating pregnancy" *Am J Surg* 1992;164: 384-8
6. Kohn SG, Briele HA, Douglas LH "Volvulus Compliating pregnancy" *Am J Obstet Gynaecol* 1944; 48:398-404.