

CASE REPORT

SIGMOID VOLVULUS WITH PREGNANCY: A CASE REPORT

Bharti Saxena¹, Sanjay Kharoliwal², Neeraj K. Dewanda³, Rajendra Kumar Tanwar⁴

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ABSTRACT: Sigmoid volvulus is an extremely rare cause of intestinal obstruction. The pregnancy itself clouds the clinical picture of sigmoid volvulus, leads to delay in diagnosis with an increases risk of gangrene formation of the gut. Here at our institution a 23 year old lady of 8 months pregnancy with chronic constipation and progressive abdominal distension presented. Her clinical examination and investigations revealed possibility of fecal impaction in colon and single viable fetus. Exploratory laparotomy was done, volvulus of sigmoid colon filled with enormous fecolith was found. Resection of bowel loop was done and a healthy preterm baby was delivered by caesarian section. Proximal diversion end colostomy was done. Both mother and child were healthy at one month follow up. However an early diagnosis and intervention as in our case, which would require a high index of clinical suspicion, could significantly improve the maternal and fetal prognosis. A review of literature did not reveal a sigmoid volvulus with enormous fecolith and good outcome of mother and baby.

KEYWORDS: Sigmoid Volvulus; Pregnancy; Intestinal obstruction.

INTRODUCTION: Pregnancy associated intestinal obstruction is a rare clinical entity carries a high maternal mortality (6%) and foetal mortality (26%) as well. The common causes of gestational intestinal obstruction are not different from the non-pregnant patients. These include adhesions, volvulus (sigmoid/caecal), intussusception, hernia, carcinoma and appendicitis.^[1] In cases of gangrenous bowel the clinical presentation and outcome is of great concern. Timely intervention is thus essential to reduce the maternal and perinatal morbidity and mortality. So far about 85 cases of sigmoid volvulus in pregnancy have been reported in English literature.^[2] All the reports are of gaseous distension and sigmoid volvulus. We hereby report a rare case of a 32 week pregnant lady who presented to us with intestinal obstruction due to sigmoid volvulus with massive faecal impaction weighing 5.3 kg. Timely surgical intervention could save both the mother and foetus.

CASE REPORT: A twenty three year old, gravida two, with one abortion in past presented with amenorrhoea of eight months duration with chronic constipation, vomiting off and on and progressive abdominal distension since last one month and severe pain abdomen for three days.

There was history of admission to surgical ward twice at 20 and 24 weeks of pregnancy respectively where she was treated conservatively as a case of subacute intestinal obstruction in pregnancy and discharged on relief of symptoms.

The patient was from tribal community, of low socioeconomic status, abandoned by her husband and could not have access to regular antenatal check-up.

Her general examination revealed tachycardia, tachypnoea and dehydration however she was afebrile and normotensive. She was in agony. Her local examination revealed asymmetric abdominal distension, more prominent in left flank. On abdominal palpation there was a large stony hard mass extending from right hypochondrium to left lumbar region. There was guarding and marked

CASE REPORT

tenderness, therefore uterus could not be felt separately. Foetal movements and foetal heart sounds could not be detected. Her bowel sounds were absent.

Her per vaginal examination revealed a posteriorly placed cervix with closed os. The laboratory tests were within normal limits except low serum potassium - 1.76mMol/L (normal - 3.5 - 5.0 mMol/L). Ultrasonography of the abdomen and pelvis showed distended bowel loops with possibility of faecal impaction in colon hindering proper evaluation of the gravid uterus. There was a single viable intrauterine foetus of 32 weeks gestation in cephalic presentation, placenta was fundal and lateral grade II and liquor was adequate (Amniotic Fluid Index - 12.4 cm.). Due to pregnancy X - ray of the abdomen was not done.

She was initially managed by general surgeons. Dehydration and electrolyte imbalance were corrected and pre-operative preparation was done. An exploratory laparotomy under general anaesthesia was done by a joint team of General Surgeons and Obstetricians.

At laparotomy an enormously distended and 180 degree rotated, distended, unhealthy, oedematous sigmoid loop was found with enormous faecolith [Figure 1]. The gravid uterus was not visible among distended gut loops. The gut was derotated and resection of the sigmoid loop was done. The resected bowel loop was containing enormous faecolith weighing 5.3 kg. [Figure 2]. Remaining gut was explored and numerous faecoliths were manipulated out of the open end of remaining proximal colon. (It weighted approximately one kg.). Since patient was under general anaesthesia for last 20 minutes, a decision for Caesarian section was taken after clamping of cut ends of colon and packing of the gut to expose the uterus. A live preterm male child of 1.5 kg was extracted out as vertex. The baby was attended by paediatrician. The APGAR score at one minute was five and at five minutes was seven. The distal end of sigmoid colon was closed and proximal diversion end colostomy was done. The baby was kept in neonatal ICU for seven days on account of prematurity and showed good recovery.

The patient stood the operation well and had an uneventful post-operative period. She was discharged on a regular diet on 10th post-operative day after removal of stitches. She came for her routine follow up after 1 month with a healthy baby.

DISCUSSION: The incidence of gestational intestinal obstruction ranges from 1 in 1500 to 1 in 66431 deliveries.^[1] Volvulus of the sigmoid colon is the most common cause of intestinal obstruction complicating pregnancy accounting for up to 44% of cases. ^[3] Caecal volvulus accounts for 25-44% of cases. ^[4] It is speculated that the enlarging uterus raises any redundant or abnormally mobile sigmoid colon out of the pelvis and the pressure from the uterus may cause kinking in the sigmoid colon where it is fixed to the pelvic wall. The ensuing proximal dilatation raises the loop producing torsion at the point of fixation and twisting of the colon.^[3]

The diagnosis of sigmoid volvulus is often delayed. This is mainly because pregnancy itself produces similar clinical picture like abdominal pain, nausea and constipation. In addition reluctance to obtain radiological evaluation in pregnancy may contribute to diagnostic delay. The significant maternal and foetal mortality associated with bowel obstruction outweighs the potential risk of foetal radiation exposure.^[4,5]

Patients who are managed within 24 hours of initial symptoms had good foetal and maternal outcome.^[6,7,8,9] In early pregnancy, Sigmoid Volvulus can be managed by lesser invasive procedures like sigmoidoscopic detorsion ^[8,10] or surgical intervention without colostomy like laparotomy and sigmoidopexy^[7] or resection and primary anastomosis, though the problem is likely to recur. In third

CASE REPORT

trimester, it is technically difficult to operate in the pelvis due to large gravid uterus acting as a mechanical impediment to detortion. When surgical intervention is required, a standard midline incision allows maximum exposure with minimal uterine manipulation. The non-viable bowel segment is resected with a diverting colostomy and the stoma being sited away from the elective area of a possible caesarian section. Primary anastomosis of an unprepared distended parietic and oedematous large bowel is generally avoided as it could be hazardous to both mother and foetus.

REFERENCES:

1. Kulusari A, Kurdoglu M, Adali E, Yildizhan R, Sahin HG, Kotan C. Sigmoid volvulus in pregnancy and puerperium: a case series. *Cases Journal* 2009; 2: 9275.
2. Khan MR, Rehman SU. Sigmoid volvulus in pregnancy and puerperium: a surgical and obstetric catastrophe. Report of a case and review of the world literature. *World Journal of Emergency Surgery* 2012; 7: 10.
3. Ballantyne GH, Brandner MD, Beart RW, Ilstrup DM. Volvulus of the colon. Incidence and mortality. *Ann Surg* 1985; 202: 83-92.
4. Augustin G, Magervic M. Non obstetrical acute abdomen during pregnancy. *Eur J Obstet Gynecol Reprod Biol* 2007; 131(1): 4-12.
5. Chen MM, Coakley FV, Kaimal A, Laros RK. Guidelines for computed tomography and magnetic resonance imaging use during pregnancy and lactation. *Obstet Gynecol* 2008; 112: 333-340.
6. Lord SA, Boswell WC, Hungerpiller JC. Sigmoid volvulus in pregnancy. *Am Surg* 1996; 62: 380-382.
7. Fraser JL, Eckert LA. Volvulus complicating pregnancy. *Can Med Assoc J* 1983; 128: 1045-1048.
8. Alshawi JS. Recurrent sigmoid volvulus in pregnancy: report of a case and review of the literature. *Dis Colon Rectum* 2005; 48: 1811-1813.
9. Allen JR, Helling TS, Langenfeld M. Intra-abdominal surgery during pregnancy. *Am J Surg* 1989; 158: 567-569.
10. Allen JC. Sigmoid volvulus in pregnancy. *Journal of the Royal Army Medical Corps* 1990; 136 (1): 55-56.



Fig. 1: Enormously distended sigmoid colon laden with faecolith being derotated

CASE REPORT



Fig. 2: Specimen of resected loop of sigmoid colon enormously distended filled with faecal matter

AUTHORS:

1. Bharti Saxena
2. Sanjay Kharoliwal
3. Neeraj K. Dewanda
4. Rajendra Kumar Tanwar

PARTICULARS OF CONTRIBUTORS:

1. Professor, Department of Obstetrics & Gynaecology, Government Medical College, Kota.
2. Medical Officer, Department of Surgery, Government Medical College, Kota.

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3. Associate Professor, Department of Surgery, Government Medical College, Kota.
4. Professor, Department of Radiotherapy, Government Medical College, Kota.

NAME ADDRESS EMAIL ID OF THE CORRESPONDING AUTHOR:

Dr. Bharti Saxena,
B-26, Sukhdham Colony,
Police Lines, Baran Road,
Kota-324001, Rajasthan.
E-mail: bharti.saxena.kota@gmail.com

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