



Review & Brief Case Report

SIGMOID VOLVULUS COMPLICATING CAESAREAN SECTION – REVIEW & BRIEF CASE REPORT

¹Puneet Kumar Agarwal, ²Vikram Vasuniya

¹MS (General Surgery), FMAS, FICRS, Associate Professor, Dept of Surgery, AIIMS Bhopal

²MS (General Surgery), Senior Resident, Dept of Surgery, AIIMS Bhopal

Conflicts of Interest: Nil

Corresponding author: Vikram Vasuniya

DOI: <https://doi.org/10.32553/ijmsdr.v4i8.637>

Abstract:

Sigmoid volvulus in pregnancy is a very rare clinical situation responsible for high rates of mortality and morbidity in both mother and fetus. It is due to the gravid uterus which itself clouds the clinical picture of sigmoid volvulus. A long and redundant sigmoid colon compressed by enlarged gravid uterus, might explain increased incidence of sigmoid volvulus during pregnancy especially during third trimester. This article describes a case with 36 weeks of gestation where sigmoid volvulus was encountered during caesarean section.

Keywords: Sigmoid, volvulus, pregnancy

Introduction:

Sigmoid volvulus in pregnancy is a very rare clinical situation which is responsible for high rates of mortality and morbidity in both mother and fetus [1] few cases are reported worldwide. The problems of sigmoid volvulus in pregnancy are delay in presentation and diagnosis. It is due to the gravid uterus which itself clouds the clinical picture of sigmoid volvulus. Sometimes this delay in diagnosis invariably leads to bowel ischemia which warrants resection and colostomy [2]

Case Report

A 24-year-old lady at 36 weeks of gestation with no significant medical and surgical history, pregnancy was going on normally; She was admitted to the department of obstetrics and gynecology with complaints of abdominal pain over the last three days, with progressive worsening despite the use of painkillers.

On exploring the case file, it was learned that on physical examination, the patient was conscious, dehydrated, with respiratory distress, fever and reduced peripheral perfusion. The abdomen showed symmetric generalized distention. During the obstetric examination, it was not possible to detect fetal movements and fetal heart sounds were absent, suggesting intrauterine fetal death. She was submitted to initial resuscitation with IV fluids, antibiotics and urinary catheterization.

Ultrasonography of the abdomen and pelvis confirmed intrauterine fetal death and revealed sub-acute intestinal obstruction too. Routine laboratory examination results were normal except for hypokalemia (2.6 mEq/L). Abdominal radiographs revealed an abnormal gas pattern, with a dilated colon in the upper abdomen. As there was no response to induction via vaginal labor and the patient conditions were deteriorating, it was decided

to carry out cesarean section in the presence of general surgery team. Patient was taken emergently for cesarean section under general anesthesia. Cesarean section was done through a lower midline incision, dead fetus extracted and uterus was repaired and the operating obstetrician noted that the bowel was dilated for which General surgery team was called. Incision was extended towards umbilicus. The abdominal cavity was accessed; the sigmoid colon was grossly distended but viable. A 180 degree anticlockwise twist was noticed, derotation done [Figure 1]. Abdomen was closed in layers with an abdominal drain placed in pelvis and the patient was handed over to Operating obstetrician.



Figure 1: Sigmoid volvulus showing grossly dilated, viable sigmoid colon.

Discussion

Sigmoid volvulus in pregnancy is an extremely uncommon condition. Only few cases have been reported worldwide. It is usually reported in institutionalized, debilitated or chronically constipated patients in which sigmoid colon

were long and redundant. Due to the high prevalence of Chagas disease in South America, many cases have been reported from here. In India and Africa increased incidence is due to high fiber diet consumption [3-4]. A long and redundant sigmoid colon compressed by enlarged gravid uterus, this might explain increased incidence of sigmoid volvulus during pregnancy especially during third trimester [5-6]. The probable mechanism behind the occurrence of sigmoid volvulus in pregnancy is due to displacement of mobile sigmoid colon by gravid uterus and can twist around its fixation of point on the sigmoid mesocolon [7-8]. The problems of sigmoid volvulus in pregnancy are delay in presentation and diagnosis and it is due to the gravid uterus which itself clouds the clinical picture of sigmoid volvulus. When a pregnant patient presents to emergency with complaints of abdomen distension, pain and absolute constipation, clinician should suspect of sigmoid volvulus. [6] Ultrasound helps in the differential diagnosis and confirmation of intra uterine fetal death. Due to higher incidence of acquired megacolon in South Africa, it's become mandatory to look for personal and family history of Chagas disease in pregnant women. The treatment modality includes endoscopic reduction and surgery. It is technically difficult to operate in the pelvis during the third trimester. In pregnancy, after rule out bowel necrosis, endoscopic decompression can have good results. Attempts of detorsion and decompression via sigmoidoscopic placement of a soft flatus tube, volvulus distortion through a flexible sigmoidoscopy, or colonoscopy are other available options [9-10]. In non pregnant patients colonoscopic detorsion is often successful but use in late trimester is rarely reported [4,8]. In patients with SV complications, a standard midline incision is to be given, which allows maximal exposure with minimal uterine manipulation when an emergency surgical intervention is required. [11] In case of non contaminated peritoneal cavity some surgeons prefer primary anastomosis with or without colonic lavage intraoperatively [12-13]. Many prefer proximal colostomy and closing the distal end (Hartmann's procedure) when bowel gets necrosed [12,14-16].

References

1. Sigmoid volvulus in pregnancy: case report and review of literature Costas Serafeimidis, Ifereimi Waqainabete, Anne Creaton, Esala Vakamacawai & Ronal Kumar Department of Surgery, Fiji School of Medicine, Colonial War Memorial Hospital, Fiji National University, Suva City, Fiji Clinical Case Reports 2016; 4(8): 759–761
2. P. W. Perdue, H. W. Johnson, and P. W. Stafford, "Intestinal obstruction complicating pregnancy," *American Journal of Surgery*, vol. 164, no. 4, pp. 384–388, 1992.
3. A. G. Gabriel, S. Gabriel Neto, E. C. Oliveira, A. O. Luquetti, R. Clevea, and B. Zilberstein, "Gastric and transverse colonic volvulus in patient with chagasic megagastria and megacolon," *Arquivos Brasileiros de Cirurgia Digestiva*, vol. 18, pp. 71–73, 2005.
4. J. C. Allen, "Sigmoid volvulus in pregnancy," *Journal of the Royal Army Medical Corps*, vol. 136, no. 1, pp. 55–56, 1990.
5. Khan, M. R., and S. Ur Rehman. 2012. Sigmoid volvulus in pregnancy and puerperium: a surgical and obstetric catastrophe. Report of a case and review of the world literature. *World J. Emerg. Surg.* 7:10.
6. Aftab, A., A. Toro, A. Abdelaal, M. Dasovky, S. Gehani, A. Abdel Mola, et al. 2014. Endoscopic reduction of a volvulus of the sigmoid colon in pregnancy: case report and a comprehensive review of the literature. *World J. Emerg. Surg.* 9:41
7. G. H. Ballantyne, M. D. Brandner, R. W. Beart, and D. M. Ilstrup, "Volvulus of the colon. Incidence and mortality," *Annals of Surgery*, vol. 202, no. 1, pp. 83–92, 1985.
8. J. S. Alshawi, "Recurrent sigmoid volvulus in pregnancy: report of a case and review of the literature," *Diseases of the Colon and Rectum*, vol. 48, no. 9, pp. 1811–1813, 2005.
9. Volvulus du sigmoïde en cours de grossesse : un piège diagnostique V. Balayaa, *,b,c, A.F. Alixd, J. Nizardd a Service de chirurgie cancérologique, gynécologique et du sein, hôpital européen Georges-Pompidou (HEGP), 20, rue Leblanc, 75908 Paris cedex 15, France Gynécologie Obstétrique Fertilité & Sénologie 45 (2017) 122–126.
10. Wani, M. D., and S. A. Mir. 2013. Gangrenous sigmoid volvulus complicating pregnancy. *World J. Med. Surg. Case Rep.* 4; <http://www.npplweb.com/wjmscr/fulltext/2/23>.
11. N. O. Machado and L. Machado, "Sigmoid volvulus complicating pregnancy managed by resection and primary anastomosis: case report with literature review," *Sultan Qaboos University Medical Sciences Journal*, vol. 9, pp. 84–88, 2009.
12. A. Redlich, S. Rickes, S. D. Costa, and S. Wolff, "Small bowel obstruction in pregnancy," *Archives of Gynecology and Obstetrics*, vol. 275, no. 5, pp. 381–383, 2007.
13. M. Safioleas, C. Chatziconstantinou, E. Felekouras et al., "Clinical considerations and therapeutic strategy for sigmoid volvulus in the elderly: a study of 33 cases," *World Journal of Gastroenterology*, vol. 13, no. 6, pp. 921–924, 2007.

16. M. S. Mirza, M. Mulla, and R. I. Hall, "Large bowel obstruction in pregnancy: a rare entity, an unusual cause," *Archives of Gynecology and Obstetrics*, vol. 279, no. 2, pp. 177–178, 2009.
17. M. A. Joshi, D. Balsarkar, N. Avasare et al., "Gangrenoussigmoid volvulus in a pregnant woman," *Tropical Gastroenterology*, vol. 20, no. 3, pp. 141–142, 1999.
18. Cheikh Malaaynine M.F., Rabbani K., Lammat H., Louzi A., Finech B., El. Mahfoudi A., Asmouki H., Aboufalah A. and Soumani A (2020); SIGMOID VOLVULUS ON PREGNANCY COMPLICATED BY FETAL DEATH IN UTERO *Int. J. of Adv. Res.* 8 (Jan). 565-569