ORIGINAL RESEARCH PAPER

Gynaecology

Volume - 7 | Issue - 2 | February - 2017 | ISSN - 2249-555X | IF : 3.919 | IC Value : 79.96

"A SURGICAL AND OBSTETRIC CATASTROPHE – SIGMOID VOLVULUS IN PREGNANCY "

KEYWORDS: Sigmoid volvulus, intestinal obstruction, pregnancy.

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ABSTRACT

INTRODUCTION: Sigmoid volvulus is a rare cause of intestinal obstruction during pregnancy. The rarity of this condition and the fact that pregnancy itself clouds the clinical picture leads to a delay in diagnosis. Effective management represents a challenge due to delayed presentation, obstructive symptoms and hesitation in using radiological evaluation.

CASE REPORT: We report a case of a lady, pregnant for 22weeks with a 3day history of abdominal pain and constipation. She underwent laparotomy for intestinal obstruction. Intra operatively dilated sigmoid colon with 360°anticlockwise twist was noted and decompression with sigmoidopexy was done. Post operative course was uneventful with viable fetus. She is asymptomatic and is on regular follow up.

CONCLUSSION: Diagnosis of sigmoid volvulus is a challenge but its delay increases the rate of feto-maternal mortality. A high incidence of clinical suspicion and timely surgical intervention are the key to a favourable outcome.

INTRODUCTION

Sigmoid volvulus (SV) in pregnancy is a very rare entity which can be associated with extremely high rates of mortality and morbidity for both mother and fetus [1]. The danger lies in the insidious nature of symptom development. Delay in presentation and diagnosis can result in bowel ischemia, which may require colectomy and formation of a stoma, and also put pregnancy in jeopardy [2].

Since, first reported by Houston in 1830, intestinal obstruction (IO) in pregnancy is still uncommon. The most common causes are adhesions, volvulus, intussusceptions, carcinoma and hernia[3]. Maternal complications include perforation, peritonitis and sepsis. Fetal complications include preterm delivery, intrauterine death, and neonatal sepsis. A high index of suspicion and use of modern imaging modalities are required for achieving better results for both mother and fetus [4]. Sigmoid volvulus is a rare surgical complication occurring in pregnancy and puerperium. Only 84 cases of sigmoid volvulus in pregnancy have been reported in the English literature so far.

CASE REPORT

A 24 yr old gravida 2, para 1 presented to us at 22 weeks of gestation with 3 days history of constipation, abdominal discomfort and pain. The pain was gradually increasing in intensity. Her pregnancy had been uneventful otherwise. She had no significant past medical history with a history of previous caesarean delivery 1 year ago. On clinical examination her vitals were stable, her abdomen appeared distended with gravid uterus corresponding to 22 weeks size with fetal viability and generalized tenderness.

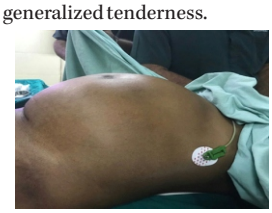

Figure 1: Pre operative picture of 22weeks pregnancy with sigmoid volvulus.

On digital examination her rectum was empty. Laboratory examination was within normal limits. In view of the pregnancy no radiological examination was done. She was admitted for observation and a surgery opinion was sought. Proctolysis enema was given but she had no relief of symptoms and over the next 24 hours her pain worsened and distension increased. A diagnosis of acute intestinal obstruction was made and patient was posted for laprotomy, after obtaining an informed consent. Intraoperatively dilated sigmoid colon with volvulus was noted which was viable. A 360 degree anticlockwise twist was noticed, which was released and sigmoid colon decompressed using nasogastric tube which was inserted rectally. Sigmoidopexy was done to the left lateral pelvic wall. Twenty two weeks gravid uterus was noted which was relaxed.

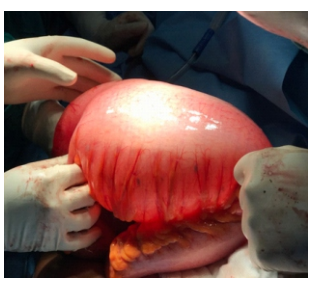

Figure 2: Dilated sigmoid colon which is viable

Figure 3: Decompression of the sigmoid colon with proximal healthy colon

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Her postoperative period was uneventful and she was discharged on 10th postoperative day.

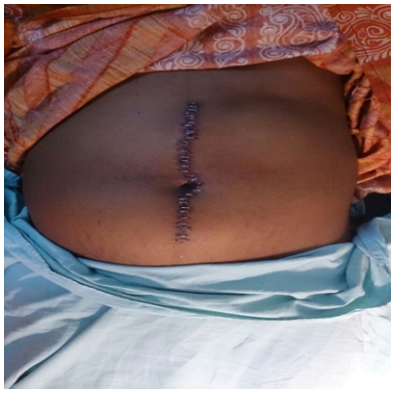

Fig 4: Postoperative day 2 with gravid uterus of 22 weeks

DISCUSSION

Sigmoid volvulus in pregnancy is an extremely uncommon condition, with only 84 cases to have been reported in the English literature. Bowel obstruction in pregnancy varies from 1 in 1500 to 1 in 66,431 deliveries, and SV is the cause of 44% of the cases. In developed countries, sigmoid volvulus is usually reported in institutionalized, debilitated, or chronically constipated patients with long redundant sigmoid colons. A high incidence reported in Africa has been attributed to a high-fibre diet. Despite this higher propensity in the third trimester, there have been reports of this complication developing in the early pregnancy as well as the puerperium [5]. A long sigmoid colon (dolichocolon) compressed by the enlarged gravid uterus can cause sigmoid volvulus. This might explain the increased incidence of SV in the third trimester of gestation [2, 3]. The diagnosis of SV in pregnancy is often delayed because the symptoms mimic typical pregnancy-associated complaints. The literature suggests to suspect the diagnosis of SV when a pregnant patient presents with abdominal distention, pain, and absolute constipation. The patient will vomit and not tolerate oral intake of food or water [2].

Intestinal obstruction in pregnancy can be caused by many factors including congenital or postoperative adhesions, volvulus, intussusceptions, hernia and appendicitis [1]. Sigmoid volvulus is the most common cause of bowel obstruction complicating pregnancy, accounting for up to 44 per cent of cases [4].

Imaging options for the diagnosis of SV in pregnancy are controversial given the rarity of this condition in pregnancy. It is widely accepted that exposure of the pregnant patient to radiation should be avoided due to the danger of chromosomal mutations during the first two trimesters and the increased risk for hematological abnormalities such as leukemia in the third trimester. The safe radiation exposure limit is between 5 and 10 rad. Ultrasound examination can confirm the dilatation of the sigmoid colon and identify the transition point. It also confirms the presence of free fluids in the abdominal cavity and the viability of the fetus. MRI, a non-ionizing radiation modality, is also reported by some authors to be helpful in diagnosing SV during pregnancy [7]. Although the radiation dose of an abdominal CT scan is thought to be within this limit, many authors still believe that CT should be avoided. This was the reason we decided to proceed to MRI option, given that it combines diagnostic accuracy and is also considered to be safe for the fetus.[6,8].

The maternal and fetal outcome in sigmoid volvulus has been directly related to the degree of bowel ischemia and subsequent systemic sepsis. Management of IO in pregnancy is generally similar to that in the non-pregnant state. Choice of treatment depends on the duration of pregnancy and the state of the sigmoid colon (5). The management of SV in pregnancy requires a multidisciplinary approach involving general surgeon, obstetrician and neonatologist [3]. In cases of bowel necrosis or perforation, surgical exploration is essential through midline laparotomy to provide good exposure with minimal manipulation of the gravid uterus. In the third trimester, if adequate intestinal exposure cannot be obtained, caesarean section must be performed. Bowel viability should be assessed carefully and examined for other areas of obstruction. Peritoneal lavage with bowel resection is mandatory, followed by stoma formation (Hartmann's procedure) in most cases, with the stoma being sited away from an area of a possible caesarean section [9]. Even though many surgeons attempt primary anastomosis in cases with uncomplicated sigmoid volvulus, this requires further thought in pregnant patients as an anastomotic leak can result in major problems to the gravid uterus and fetus [2].

CONCLUSION

Sigmoid volvulus complicating pregnancy is a rare condition with significant maternal and fetal morbidity and mortality. Early diagnosis mandates a high index of clinical suspicion in patients presenting with abdominal pain, distension and absolute constipation. X rays in view of pregnant situation must be avoided and appropriate management must be defined. Delay in diagnosis and treatment beyond 48 hours results in increased maternal and fetal morbidity and mortality. Review of available literature emphasizes the importance of early diagnosis and timely intervention to minimize these complications and achieve a definitive cure.

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