Case Report

Maternal Death due to Delayed Management of Sigmoid Volvulus at 32 Weeks Pregnancy

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Abstract:

Colonic obstruction due to sigmoid colon volvulus during pregnancy is a rare but a serious complication with significant maternal and foetal mortality. We describe a case of sigmoid volvulus in a patient with 32 weeks of gestation that developed complete necrosis of the sigmoid colon who was admitted with 6 days of abdominal distension, vomiting, and the stoppage of the passage of gases and faeces with poor clinical conditions and signs of diffuse peritonitis. Abdominal ultrasound showed single viable foetus 32 weeks. Abdominal radiography showed severe dilation of the colon with horseshoe signal suggesting a sigmoid volvulus. The patient delivered vaginally 1.8 Kg male baby admitted to the nursery and passed later on from respiratory distress syndrome. With a diagnosis of complicated sigmoid volvulus, she underwent laparotomy where we found, an enormously distended sigmoid loop with gangrenous changes the sigmoid colon was resected and Hartman's procedure was performed. Poor postoperative recovery and the patient passed day 3 postoperativelyfrom septic shock.

Keywords: pregnancy; volvulus

Introduction

Intestinal obstruction complicating pregnancy is extremely rare and serious with an incidence between 1/1500 and 1/66000 deliveries. [(1)]Volvulus of sigmoid colon is the most common cause of intestinal obstruction complicating pregnancy,

accounting for up to 44% of cases [2]. Only 76 cases of volvulus in pregnancy have been reported worldwide [3].Early diagnosis and prompt intervention minimise maternal and foetal morbidity and mortality. The main problem of sigmoid volvulus in pregnancy is the delay in presentation and diagnosis. Delay in diagnosis invariably leads to ischemia, necrosis, and perforation of the colon, and prompt surgical intervention is necessary to minimize the high rates of maternal and foetal mortality. The reported maternal mortality is 6% with a foetal mortality of 26% [4, 5]. The causes of intestinal obstruction during pregnancy are similar to what occurs in their absence [6]. The purpose of this paper is to present a complicated case of intestinal obstruction, a consequence of sigmoid volvulus, with double twist of the sigmoid mesocolon, in 32 weeks of gestation which required urgent surgical treatment and the importance of early intervention

Case Report:

A 25 -year-old woman gravida 4 para 3 at 32 weeks of gestation, with a history of normal pregnancy was admitted to obstetrics ward with complains of abdominal pain, vomiting and constipation over the last six days for which she received symptomatic treatment attributed to her pregnancy. She had no history of previous medical problems or prior abdominal surgery. Clinical abdominal examination revealed peritoneal irritation, fundal level at 32 weeks, the cervix was effaced located in anterior position, with 6 cm dilatation, temperature was 39°C, pulse rate and respiratory rate were 100 and 40 per minute respectively and Blood pressure was 90/60 mmHg. Hemoglobin was 8.1mg/dl, creatinin was 0.6 mg/dl, and sodium and potassium were 137 and 4.6 mmol/l respectively. White blood cell count was 14,600 in micro liter. Ultrasonography of the abdomen and pelvis showed single viable 32weeks foetus.Initial resuscitation with IV fluids and nasogastric suction was made.After delivery of the preterm baby abdominal radiographs revealed a dilated colon with the image of “horseshoe” suggesting the presence of sigmoid volvulus. The patient was taken emergently for exploratory laparotomy under general anaesthesia. At laparotomy, an enormously distended sigmoid loop with gangrenous changes was found. The sigmoid colon was resected (Fig. 1) and Hartman's procedure was performed. The patient was admitted to the intensive care unit and passed day 3 from septic shock.

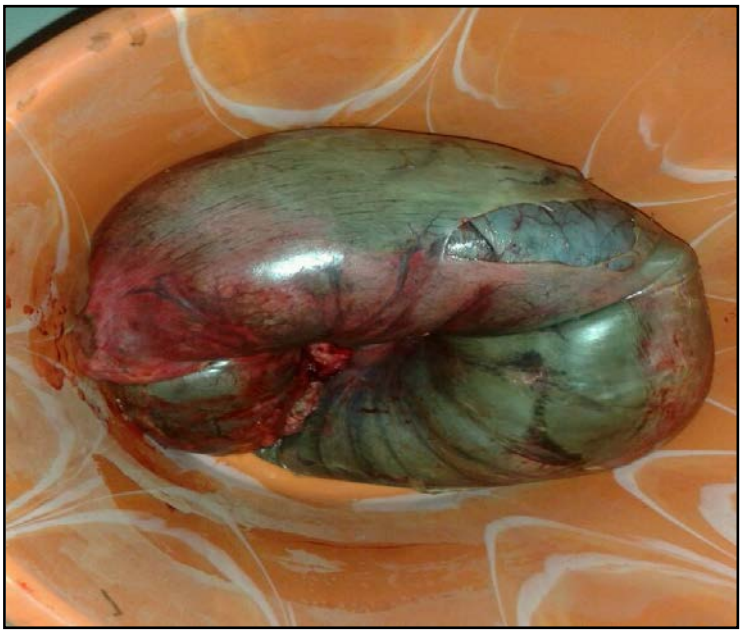

Figure 1: Resected gangrenous sigmoid

Discussion:

Bowel obstruction in pregnancy is rare, most frequently being caused by sigmoid volvulus and adhesions. Only 76 cases of volvulus in pregnancy have been reported worldwide[3] An increase in uterine volume is implicated in the formation of the volvulus by pushing the long redundant sigmoid colon out of the pelvis, which then twists around its point of fixation on the pelvic sidewall. Sigmoid volvulus is most frequent between 22 and 38 weeks gestation [7] which has a significant maternal and foetal mortality rate. The diagnosis is based on clinical and radiological signs, standard radiography is often necessary for the diagnosis of volvulus but it carries a risk of 1/1000 of congenital malformation in the early pregnancy [8]. Unfortunately, the pregnancy itself clouds the clinical picture because abdominal pain, constipation and leucocytosis are otherwise normal findings in pregnancy. In addition, hesitation in obtaining radiography contributes to delayed diagnosis.It is noticeable that our patient was in third trimester of pregnancy without any previous history of surgery. Her discomforts were

attributed to pregnancy despite seeking medical advice several days before massive bowel necrosis. Delay in diagnosis and surgical intervention increases morbidity and mortality rate. Goals for treatment of large bowel volvulus should include physician awareness of this uncommon diagnosis; accurate workup, and early surgical intervention Therefore, close cooperation between surgeon and obstetrician is obligatory.We conclude that volvulus of the large bowel is a rare cause of acute abdomen that must be considered. Early surgery is mandatory to reduce the risk of gangrene, which is known to double the mortality.

Conclusion

Sigmoid volvulus complicating pregnancy is an uncommon and potentially devastating development and should be recognized as a surgical emergency. Diagnosis requires a high index of suspicion in a patient who presents with complaints of abdominal pain and evidence of bowel obstruction. Delay in diagnosis and treatment beyond 48 hours results in colonic necrosis and increased foetal and maternal morbidity and mortality. Prompt intervention is necessary to minimize these complications and achieve a definitive cure.

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