Texila International Journal of Public Health
ISSN: 2520-3134
DOI: 10.21522/TIJPH.2013.12.04.Art022

A Case Report of Gangrenous Small Bowel Obstruction in an Antenatal Women

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Abstract

Gangrenous intestinal obstruction during pregnancy is a rare and life-threatening non-obstetric surgical emergency that may result in maternal and fetal mortality. These patients were often confronted with a diagnostic and therapeutic challenge since the condition is rare and overlapping of symptoms occurs. It also raises concerns over radiological evaluation and the risk involved with surgery and anaesthesia. The diagnosis is delayed due to common and overlapping symptoms and also inhibition to carry out ionising radiological investigations in pregnancy which could be harmful to the fetus. Antenatal women, 29 years old at 28 weeks of gestation presented with abdominal pain and fever. Ultrasound done immediately showed adherence of small bowel loops suggestive of intestinal obstruction. She was taken up for emergency laparotomy and proceeded with resection of the gangrenous segment completed with anastomosis. The postoperative period was uneventful. The patient was stable on discharge. Prompt diagnosis should be made and the appropriate treatment should be taken as soon as possible. Surgical intervention should be taken if necessary as earlier diagnosis and management decreases morbidity and mortality.

Keywords: *Gangrenous Small Bowel Obstruction in Pregnancy, Intestinal Small Bowel Obstruction, Surgery.*

Introduction

Small bowel obstruction with gangrenous type in pregnancy is rare and prevalence is around 1 in 17,000 deliveries. It is caused due to adhesions from previous surgeries, volvulus and malignancy [1]. Once the diagnosis of small bowel obstruction is made, it will be proceeded with laparotomy in all cases because of the significant risks of fetal loss and associated maternal morbidity and mortality.

Case Report

A 29-year-old woman, Gravida 5 Para 2 Live 2 Abortion 2, presented at 28 weeks of gestation with severe abdominal pain, nausea and fever for 1 day [11,12]. She had no complaints of constipation, vomiting, or urinary symptoms [4]. This was a spontaneous conception and her antenatal period so far has been uneventful. History of two previous Full term Normal vaginal delivery and two abortions which were spontaneous abortions in the third month (Dilatation and Curettage done) and fifth month (Intrauterine demise, fetus expelled and check curettage done).

History of open appendicectomy done 7 years ago and no significant past medical history.

On admission, she was febrile, with no pallor, no pedal oedema with tachycardia and normal blood pressure. On abdominal examination uterus at 28-30 weeks, relaxed, Fetal heart sound present. She had epigastric tenderness and sluggish bowel sounds. NST was reactive. On Per vaginal examination, the

Received: 16.07.2024 ***Accepted: 05.10.2024*** ***Published on: 27.12.2024***
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cervix was uneffaced, or closed and no discharge or bleeding per vaginum.

Blood investigation showed elevated Total leukocyte count and ESR. Renal and liver parameters were normal. The probable diagnosis was threatened preterm labour and intestinal colic was kept as a differential diagnosis. She was commenced on IV fluids, Antiemetics, and Antipyretic and kept Nil per oral.

Ultrasound whole abdomen showed dilated small bowel loops filled with fluid and undigested food particles [figure 1]. The peristaltic area of the distal Ileum showed segmental ileal thickening suggestive of Ischaemic small bowel obstruction at the distal ileum and adherence of small bowel loops causing intestinal obstruction.

An urgent Surgical gastroenterologist opinion was obtained and the patient was taken up for Emergency Laparotomy. Intraoperative findings: Omental and small bowel loops adherently seen in the Right iliac fossa at the previous appendicectomy scar. Closed loop terminal ileal obstruction with Gangrene of about 20cm just proximal to Ileocecal junction [figure 2]. The ileum was transected about 5cm proximal to the Gangrene segment and distally at the Right of the Transverse Colon. Ileocolic, Right colic, Right of middle colon ligated and remaining part of the terminal ileum, caecum, hepatic flexure of Right of the transverse colon was everted. Both terminal ileal end and Transverse Colon were sutured with 3-0 vicryl and side to side Ileo transverse anastomosis with 3-0 vicryl. Peritoneal lavage was given. Draining Tube 28fr was placed in the mission pouch, the mesenteric defect closed and the abdomen closed in layers after obtaining hemostasis.

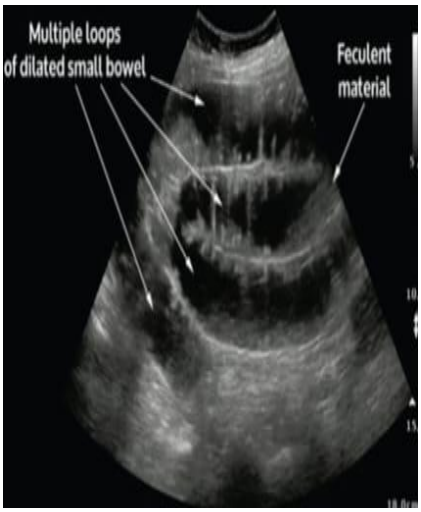

Figure 1. USG showed Dilated Small Bowel

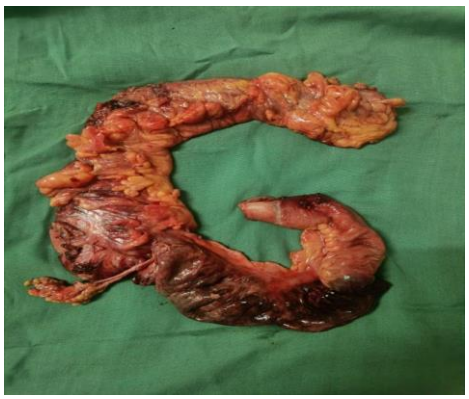

Figure 2. Gangrenous Distal Ileum

Postoperative Period

Due to the complexity of the surgery, the gastroenterologist was advised to shift the patient to the ICU for observation and monitoring.

Hence patient was shifted to the ICU and was monitored in the ICU until the 6th postoperative day - the patient was on IV fluids, and IV antibiotics and the Fetal Heart Rate was monitored periodically.

On the 7th postoperative day - the patient shifted to Antenatal HDU, Intraperitoneal drain tube was removed. Vitals and Fetal Heart Rate were monitored until the 13th postoperative day.

On the 14th Postoperative day - suture removal was done and the patient was discharged.

Discussion

In this case, gangrene was found approximately 20 cm Proximal to the ileocecal junction of about 5 cm in length at the terminal part of the ileum.

In the above case, small bowel obstruction was due to the adhesions of the previous appendicectomy surgery[3]. Other causes include volvulus or malignancy and hypercoagulable disorders[1]. Small bowel obstruction with gangrene is a rare type [2,5,10,12]. Recurrent early small bowel obstruction was also common in previous surgeries [15]. The prevalence of intestinal small bowel obstruction in antenatal women is 1 in 17,000 deliveries. It is caused by the blood supply to that segment of the small bowel being cut due to adhesions of previous surgery resulting in reduced blood flow, prolonged lack of oxygen leads to necrosis and necrotic tissue becoming gangrenous, leading to perforation, peritonitis and ultimately resulting in sepsis. To prevent those complications we should make a prompt diagnosis at the earliest and perform the necessary intervention.

Acute abdominal pain in pregnancy is a common symptom that can be due to obstetric as well as non-obstetric conditions [1]. The causes for non- obstetric emergencies due to any gastrointestinal (GI) disorder can occur during pregnancy. Pregnant women with non-obstetrical causes of abdominal pain of about 0.5-2% result in surgery. Although mostly small bowel obstruction is caused by adhesions from previous surgeries [6,14]. Other etiologies include hernias, volvulus [1], malignancy, appendicitis [7] and mesenteric vessel thrombosis [8,9]. Diagnosis of small bowel obstruction in pregnancy can be difficult as symptoms such as abdominal pain, nausea and constipation are also common in normal pregnancies.

If the diagnosis is delayed, it can cause bowel strangulation which may result in maternal mortality and fetal demise.

The management of small bowel obstruction in antenatal women may vary based on several factors including causes, clinical presentation, maternal-fetal condition and gestational age. However, studies have demonstrated that surgery is eventually necessitated in the majority of small bowel obstructions during pregnancy.

Conclusion

This study reported a case of Gangrenous small bowel obstruction in antenatal women with a previous history of appendicectomy. Surgery is the mainstay of treatment in any case of acute gangrenous small bowel obstruction.[3,13] The Patient was taken up for Emergency laparotomy and proceeded with Ileo transverse colon anastomosis. This underlines the necessity of prompt clinical suspicion and radiological investigation to reduce the morbidity and mortality of the mother and fetus. Small bowel obstruction should be considered as a differential diagnosis in any pregnant patient with an acute abdomen.

Ethical Approval

It does not apply to this case report.

Conflict of Interest

The authors declared that conflict of interest not exists.

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