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Research Article

INTESTINAL OBSTRUCTION DURING PREGNANCY-A REVIEW AND REPORT OF TWO CASES

Geetha Lakshmi R and Saraswathi K

Department of Obstetrics and Gynaecology, Sree Balaji Medical College and Hospital, Chromepet, Chennai

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ABSTRACT

Intestinal obstruction in pregnancy is a rare entity. Herein we report two cases of sub-acute intestinal obstruction during pregnancy, one was conservatively managed, whereas the other was intervened for obstetric cause. Case1:Second gravida with 31 weeks and 4 days of pregnancy with previous histories of treated abdominal tuberculosis and laparoscopic bowel adhesiolysis, presented with pain abdomen, vomiting. Sonographic evidence consistent with intestinal obstruction. Patient was managed conservatively with parenteral supplements, nasogastric decompression and foetal monitoring. In course of management she delivered a preterm neonate spontaneously, followed by regression of her symptoms. Case2: Second gravida with 37 completed weeks complicated with central placenta praevia, presented with pain abdomen, nausea, vomiting and constipation for short duration with spotting per vaginum. Emergency Caesarean section proceeded, which ended up in caesarean hysterectomy and coincidental finding of peritoneal reflection compressing distal ileum, which was severed and an uneventful postoperative period. Hence, intestinal obstruction during pregnancy though uncommon, needs high index of suspicion for diagnosis, management and to prevent maternal, foetal morbidity and mortality.

INTRODUCTION

Intestinal obstruction in pregnancy is a rare surgical emergency with the commonest cause being surgical or inflammatory adhesions. The diagnosis and management of intestinal obstruction is same for pregnant and non-pregnant woman with some radiological exceptions. Prompt diagnosis and appropriate treatment would prevent the maternal, foetal morbidity and mortality. Strict monitoring with parenteral nutrition and nasogastric decompression with appropriate antibiotics would improve patients with simple intestinal obstruction, without any unnecessary surgical intervention. However certain worsening situation warrants surgical intervention.

Case Reports

Case 1: A 26 years female, G2P1L1, previous full term normal vaginal delivery with gestational age (31 weeks and 4 days) came with complaints of acute abdominal pain, colicky in nature, which was radiating to the back, associated with 2 episodes of vomiting containing undigested food particles, not bile or blood stained. She was able to perceive her foetal movements well and there was no history of bleeding or draining per vaginum. There wasn't any history of constipation, diarrhoea or bleeding per rectum. She was a known case of abdominal tuberculosis and had completed a course of anti-tuberculosis treatment 8 years before. Her previous pregnancy and peripartum periods were uneventful. Thereafter, she was apparently alright for 5 years, after which she developed abdominal pain for which she was evaluated and undergone laparoscopy. Where she found to have small bowel obstruction secondary to fibrous inflammatory adhesions, adhesiolysis done, specimen from inflammatory zones showed fibro collagenous tissue with focal inflammatory changes.

On admission, she was moderately built and nourished, no pallor, febrile and her vitals were stable. On abdominal examination, there was distension in the epigastric region, tenderness in the right hypochondrium with sluggish bowel sounds. Obstetric examination, uterus corresponds to 30 weeks of symphysio-fundal height, not tense, not tender, foetus with cephalic presentation and a good foetal heart rate. There was no bleeding or draining per vaginum. She was not on labour at the time of admission. Sonographic examination showed, multiple dilated fluid filled small bowel loops[fig.1] and a left upper pole renal calculus of about 5 mm, and a single live intrauterine gestation corresponding to the period of gestation with good foetal wellbeing. No evidence of abruption. All other abdominal organs were normal.

Corresponding author:* **Geetha Lakshmi R
Department of Obstetrics and Gynaecology, Sree Balaji Medical College and Hospital, Chromepet, Chennai

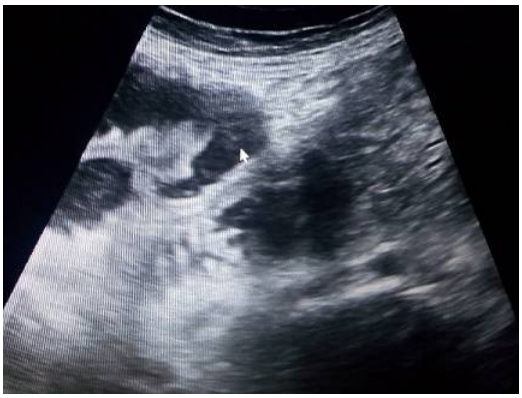

Figure 1 Showing dilated fluid filled bowel loops.

Laboratory findings, Hemoglobin was 10 gms%, her total counts and ESR elevated, with normal serum potassium, amylase, lipase, renal and liver parameters. Urinary examination showed plenty of pus cells with few RBCs, but no growth in culture.

On a multidisciplinary approach, patient was diagnosed to have small bowel obstruction, then she was put on complete bowel rest by nasogastric decompression and she was started on parenteral supplements with Fluids, Antibiotics, Analgesics, Proton Pump Inhibitors and Antiemetic. She was catheterized to monitor her fluid balance. On day two of conservative management, she had haematuria and sonographic evidence consistent with bilateral hydroureteronephrosis, bladder wall normal, no clots. Urologist opinion sought, advised for bladder wash and coagulation profile, which was normal. Then patient was advised urology review later after delivery. Her general condition gradually improved and her vitals were maintained. Antenatal corticosteroids considered. After a four days of conservative management, she started spontaneous onset of preterm labour, and delivered an alive preterm male baby of 1.7 kg. Uterus well contracted, no postpartum haemorrhage and placenta examined for abruption, no evidence. Baby was healthy and subjected to NICU care for preterm low birth weight.

After delivery, CT scan abdomen done, showed subacute intestinal obstruction probably due to adhesion/stricture [fig.2].

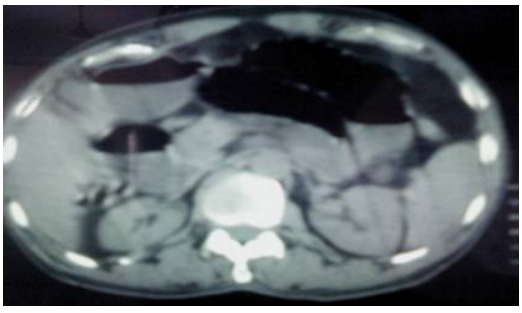

Figure 2 Postpartum Plain CT showing dilated small bowel loops.

She was continued on nil per oral, for another two days. Gradually her abdominal distension decreased, bowel sounds established, on third postpartum day patient passed motion, she was then started on oral fluids. She tolerated oral fluids well followed by solid foods. Ultrasonogram abdomen done, showed normal study and no hydroureteronephrosis. Now patient is on regular follow up.

Case 2: A 30 years G2P1L1, previous full term normal vaginal delivery, her last child birth 4 years, with 37 completed weeks, who was a known case of central placenta praevia since her anomaly scan, admitted with complaints of spotting per-vaginum, abdominal pain, nausea, vomiting and not passed motion for 3 days. No history of abdominal surgery in the past. In view of Central placenta praevia, an emergency caesarean section proceeded with all protective measures to handle post-partum haemorrhage. After delivery of baby,it was found to be placenta accreta with torrential bleeding not responding to oxytocics. Hence, proceeded to caesarean hysterectomy with left salpingo-oophorectomy. After checking haemostasis, bowel exploration done with general surgical team, found to have a small peritoneal reflection compressing distal ileum which was severed. But, it may be insignificant since small bowel was healthy and dilatation was minimal [fig.3]. Complete haemostasis secured, pelvic drain tube placed, wound closed in layers. Post-operative period uneventful. Bowels movements returned on 3rd post-operative day.

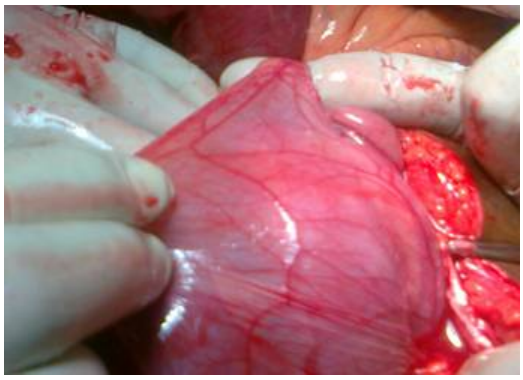

Figure 3 Intra operative picture showing a peritoneal band

DISCUSSION

Acute abdomen during pregnancy is a challenging problem in obstetric practice, since it needs utmost care to both mother and the foetus. Non obstetrical causes of acute abdomen during pregnancy are acute appendicitis, acute pancreatitis, acute cholecystitis and bowel obstruction. Intestinal obstructions in pregnancy is a rare condition with incidence of 1:1500 to 1:66,400 pregnancies and are surgical emergencies that require prompt evaluation and management[a,b,c]. Intestinal obstruction is the third most common cause of non-obstetric laparotomies during pregnancies. The clinical presentation is similar to non-pregnant state however it may be non-specific, common in the third and second trimester with least incidence in first trimester and puerperium. The clinical signs of presentation are colicky abdominal pain, abdominal distention, emesis and obstipation. Although a rare condition, present with significant maternal (up to 20%) and foetal mortality (40%)[d,e,]. Hence timely diagnosis and management is crucial in minimizing maternal, foetal morbidity and mortality. The causes for intestinal obstruction are adhesions (Post-operative or inflammatory), neoplasms, Crohn's disease, volvulus, intussusception, post radiation or post ischemic stricture, foreign body, gall stone ileus[f,g,h]. The reason for bowel obstruction during pregnancy in patients with previous history of adhesion is due to distortion of intraperitoneal organs by enlarging gravid uterus[i].Patients can be evaluated with plain abdominal x-ray since its radiation dose is nominal, however in our institute we do not

routinely perform x-ray, instead we go for ultrasonogram and magnetic resonance imaging. Treatment of bowel obstruction is the same during pregnant and non-pregnant states[g]. Conservative therapy is attempted first, consisting of bowel rest and decompression, along with fluid and electrolyte replacement. If the abdominal pain doesn't settle with the conservative line of management and become continuous, persistent tachycardia, pyrexia with a positive Blumberg's sign as in case of complete obstruction or failed partial obstruction, warrants surgical intervention. The type of intervention depends on gestational age, foetal distress and severity of abdominal condition. If there is prematurity without foetal distress then formal laparotomy is done as in non-pregnant women. If there is foetal distress then obstetric intervention followed by abdominal exploration is recommended. Our first case responded well to conservative line of management, here we followed a multidisciplinary approach involving general surgery, surgical gastroenterology and high risk obstetric ICU care. This made us to bring the peripartum period uneventful without maternal and perinatal complications. In our second case since there was obstetric indication, we intervened.

CONCLUSION

Although bowel obstruction is rare during pregnancy, a high index of suspicion is needed in patients with prior history of abdominal procedure or chronic abdominal conditions. Every case must be 'admitted and observed' on suspicion. Diagnostic delay is common, but early diagnosis and needy interventions are crucial to reduce maternal and foetal mortality and morbidity. In our patient, since the obstruction is in the third trimester, conservative management improved the general condition of the mother and spontaneous onset of labour was possible, otherwise need surgical intervention as per obstetric or surgical indication.

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