Malrotation Of Gut With Volvulus In Early Pregnancy

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Abstract : Intestinal obstruction in pregnancy is uncommon, but is associated with significant maternal and fetal mortality. The delay in diagnosis is due to nonspecific symptoms and a disinclination to carry out radiological investigations in pregnancy.We report a rare case of transverse colon volvulus due to malrotation of gut leading to intestinal obstruction in early pregnancy.Surgical intervention was done and the patient had a successful recovery.With this case we would like to emphasize the need for thorough investigations and clinical suspicion of rare causes of acute abdomen in pregnancy. [Kharka L et al NJIRM 2013; 4(5) : 109-110]
Key Words: Pregnancy, Intestinal Obstruction, Volvulus, Malrotation.

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Introduction: Intestinal obstruction can occur in pregnancy but is uncommon. Malrotation of gut leading to volvulus is an extremely rare case of intestinal obstruction during pregnancy. The reported incidence of intestinal obstruction complicating first time in pregnancy varies widely from 1 in 1500 to 1 in 66431 birth cases or deliveries[1]. Diagnosis is often delayed due to delay in presentation, poor knowledge of the condition and a hesitation to use radiological investigation in pregnancy, as well as attributing the clinical features to other ailments of pregnancy .Recently we encountered a rare case of acute intestinal obstruction due to volvulus oftransverse colon with malrotation of gut which manifested for the first time in early pregnancy and required urgent surgical intervention.

Case Report : A A24 year old lady,primigravida at9weeks gestationpresented with intermittent pain abdomen,fever with chills and vomiting.She had no prior medical or surgical history.She was referred to us from a different hospital with findings of bilateral renal calculi for further management.

On admission(day1),her physical examination was unremarkable .Laboratory investigations were normal except urine showed presence of bacteria .Trans vaginal sonography showed a viable fetus corresponding to 9 weeks. After seeking urologists consult, a working diagnosis of ureteric colic was made. She was treated conservatively and the initial abdominal ultrasound was normal.

Over next 72 hours(day3) she developed diffuse colicky pain and constipation. Surgical consultation was sought, she was given enema and antispasmodics. On day5, patient continued to have pain,developed mild abdominal distension with diffuse tenderness and hyper peristaltic sounds suggestive of intestinal obstruction. Conservative management was continued keeping patient nil per oral, Ryle's tube aspiration and intravenous fluids. Ultrasound then repeated revealed moderate asciteswith? dilated small bowel loops. On day6,as her symptoms worsened with persistent abdominal distension, tachycardia and sluggish bowel sounds, patient was taken up for exploratory laparotomy.

Fig1- Large Bowel On Left Side Of Abdomen With Non- Fixation Of Caecum And Ascending Colon With Transverse Colon Anticlockwise Volvulus. Small Bowel Is On Right Side

On laparotomy, (Fig 1) there was malrotation of gut with volvulus of transverse colon anticlockwise with dilatation of proximal bowel loops. Derotation of the volvulus was done followed by interloopal adhesiolysis. The entire length of the bowel was viable with no evidence of ischemia, there were no

Ladd bands across the duodenum. Appendectomy was done to prevent diagnostic confusion in future. The large bowel was repositioned towards left and small bowels on right side. The postoperative period was uneventful, she was symptom free and her pregnancy continued uneventfully. The postoperative period was uneventful, she was symptom free and her pregnancy continued uneventfully.

Discussion: Intestinal obstruction (IO) in pregnancy is rare .Major causes include adhesions, abdominal wall hernias, cancer of colon, meckels diverticulum, volvulus, intussesupcion[2, 3, 4.]

Although uncommon, IO in pregnancy carries a significant maternal mortality (6%) and fetal (26%) mortality[4].Often this is due to delay in diagnosis and treatment because the symptoms mimic pregnancy associated complaints and hesitation to use radiological investigations. Intestinal volvulus is responsible for 25% of acute bowel obstruction in pregnant women and 3-5% in non-pregnant women. The malrotation of the bowel makes it susceptible for volvulusas they are redundant and have defect in fixation as in our case where there was non- fixation of caecum and ascending colon making them susceptible for volvulus.

Intestinal rotation and positioning occur in the fetus in early gestation. Arrest at any step of this process results in malrotation. Most patients are symptomatic early in life, with 75-80% presenting with amid-gut volvulus during the first month of life. Less frequently, patients may present with symptoms later in life[5].Older patients usually present with vague, chronic symptoms rather than the acute symptoms seen in infants and childhood .The most common symptom is vomiting, intermittent crampy abdominal pain from torsion or bands or volvulus. Complications from intestinal malrotation including volvulus, ischemia, infarction of the bowel can be life threatening or cause marked morbidity. The diagnostic modalities include X-ray, USG, and MRI. In our patient the diagnosis was delayed because initially her clinical picture and ultrasound were suggestive of ureteric colic ,but subsequently as her symptoms worsened she was taken up for exploratory laparotomy .There was always reluctance in using radiological studies due to her early pregnancy. Treatment is often surgical, if there is concomitant volvulus, it should be relieved and viability of the bowel should be assessed. If there is non-fixation of the caecum and ascending colon, the cecum should be stabilized.

Management is similar to non-pregnant women. Clinical suspicion is vital and joint management between surgeons and obstetrician is crucial. The basis of treatment is timely surgery minimizing delays in decision. In our patient, as conservative measures failed she was planned, for emergency exploratory laparotomy where the actual cause was diagnosed and appropriate surgical procedure could be accomplished.

Conclusion: Malrotation of gut leading to volvulus of pregnancy 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.

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