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Review Article

A RARE CASE OF BROAD LIGAMENT ECTOPIC PREGNANCY

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ABSTRACT

Ectopic pregnancy continues to be an obstetric challenge despite the advancement of technology. Abdominal pregnancy is rare (1in 10,000 births) and extremely serious form of extra uterine pregnancy. It can pose a major diagnostic hurdle with many being diagnosed only intra-operatively. We report a case of a 26 year old nullipara who presented with 6 weeks of amenorrhea with abdominal pain since 5 hours and one episode of syncope. She was hemodynamically unstable, routine ultrasound revealed an empty uterus with free fluid in the abdomen. It was diagnosed as a ruptured ectopic pregnancy and taken up for an emergency laparotomy. She had a right broad ligament ectopic pregnancy which had ruptured. Both the tubes, ovaries and uterus was found intact. Excision of the ruptured ectopic mass on the right side of the broad ligament was done. The specimen was sent for histopathological examination and confirmed. Postoperative course was uneventful and serum HCG was undetectable at the fourth week after surgery. Awareness about this rare form of ectopic pregnancy is observational and mainly comes from reported cases. A high index of suspicion is needed for early diagnosis and intervention.

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INTRODUCTION

Ectopic pregnancy occurs when the fertilized ovum implants outside the uterine cavity, the most common site being the tube. The incidence of abdominal pregnancy is 1 % (1). Primary abdominal pregnancy is rare, secondary abdominal pregnancy may be seen after tubal rupture, where the blastocyst starts growing in the ovary, POD, broad ligament, liver and spleen. Maternal Mortality has been reported as high as 20% (2) and perinatal mortality ranges from 40-95% (3). This is usually because of the placental location on the bowel, bladder and other viscera leading to torrential hemorrhage. Abdominal pregnancy can be due to long standing pelvic inflammatory disease. The complications of pregnancy in the broad ligament include abdominal pain, rupture of the gestational sac with hemorrhage into the peritoneal cavity, vaginal bleeding, an abnormal lie, placental insufficiency and pseudo labor followed by fetal death. In hemodynamically unstable patients laparotomy is mandatory. The management of pregnancy in broad ligament is surgical removal of fetus and placenta (4). This case is reported because of its rare occurrence and the challenges encountered in the treatment.

Case report

A 26 year old housewife from urban Bangalore was brought to the emergency department with complaints of severe abdominal pain since 5 hours with one episode of syncope. She had amenorrhea of 6 weeks duration. She was recently married (5 months). Her past history and family history were unremarkable Physical examination revealed severe pallor, blood pressure was 90/60 mm of Hg, tachycardia of 119/minute with low volume.

Patient was drowsy but responding to verbal commands. Abdomen was distended with rigidity of the lower abdomen. Per vaginal examination revealed a normal size uterus with severe tenderness in bilateral fornices, movements of the cervix were painful. Emergency USG revealed an empty uterus with

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thickened endometrium and free fluid. G-sac could not be localized. Her UPT was positive and serum B-HCG was low, a working diagnosis of ruptured ectopic pregnancy was made. She was resuscitated with fluids, all routine investigations were sent. Blood was sent for cross matching, and taken up for an emergency laparotomy after counseling about her current condition and taking an informed consent. Laparotomy through Pfannenstiel incision was done under general anesthesia Intraop there was massive haemoperitoneum of more than 1.2 liters of blood and plenty of clots were removed. Surprisingly both the tubes and ovaries looked normal. On careful inspection there was a small rent of 1X1.5 cm with serrated edges seen on the posterior leaf of the right broad ligament from where she was actively bleeding. The edge was excised and sent for biopsy, haemostasis was secured. Patient received 2 packed cell volumes and recovered well. The patient had an uneventful recovery and was discharged on the third postoperative day. Her serum HCG was undetectable on the fourth week of follow-up visits.

DISCUSSION

Abdominal pregnancy in the broad ligament is seen when the gestational sac gets implanted in the leaves of the broad ligament also known as interligamentous pregnancy. It is a rare and extremely morbid form of ectopic pregnancy in which implantation may occur in the omentum, vital organs or large blood vessels.

It is a retroperitoneal pregnancy resulting when the trophoblast tissue penetrates through the tube into the broad ligament. rarely can it occur when the pregnancy erodes through the previous caesarean scar and gets implanted into the leaves of the broad ligament. Rare types of secondary abdominal pregnancies can occur after spontaneous separation of an old caesarean section scar, after uterine perforation during a therapeutic or elective abortion, and after subtotal or total hysterectomy. (5).

Though the definite pathogenesis for the development of broad ligament EP is unknown some suggest that the likely risk factors are endometriosis, previous ectopic pregnancy, IUCD usage, PID, use of mini pill. However, this presented case had no identified risk factors for EP. It is reported that one-third of cases have no known risk factors (6).

The risk of maternal morbidity and mortality is directly proportional to the duration of gestational age, growth and erosion of gestational tissue into the broad ligament being the cause.

Ectopic pregnancy may present with various symptoms, from pain abdomen to bleeding per vaginum. But abdominal pregnancy presents very vague clinically. Patient may present with a vague, dull abdominal pain which can be due to placental separation, broad ligament tears or minor peritoneal hemorrhages. (7) Late diagnosis is associated with a high risk of rupture, disseminated intravascular coagulation (DIC), bowel obstruction and fistula. (8)

Almost 40-50% of ectopic pregnancies are missed in first visit; this can be due to failure to elicit proper history and to identify the risk factors. (9). Most of the abdominal pregnancies are identified only intraoperatively because of the great variability in the clinical presentation and the rarity of its occurrence. Even with the use of ultrasound, it may be misdiagnosed as another pelvic pathology such as fibroid.10 TVS is a better option than TAS in ectopic pregnancy, as it gives a better view of the uterine cavity and the adnexa.but to diagnose ectopic pregnancy one should have a high index of suspicion. MRI provides additional information and may help in surgical planning by evaluating the extent of uterine and mesenteric involvement (11) Karaer *et al* has suggested that Diagnostic laparoscopy and MRI are promising modalities that may be valuable in doubtful cases. (12)

The choice of management option depends on the gestational age. Medical therapy can be used in early cases while advanced interstitial EP needs surgical intervention either conservative or radical depending on the clinical state of the patient. Abdominal pregnancy ideally should be managed with laparotomy because of the risk of massive hemorrhage. However in early pregnancy and stable patients laparoscopic removal has been reported which needs highly skilled and confident surgeon.(13) Sometimes a broad ligament pregnancy can grow up to a full term and delivered by laparotomy. In such cases the management of the placenta is extremely difficult because it will be adherent to the intestines. (14)

The most feared complication encountered during surgical intervention especially in advanced gestational age is hemorrhage as reported by Rahaman and Cardosi *et al.*(15) Rapid diagnosis with accurate surgical measures generally improves the mortality and morbidity associated with this condition.

As regards subsequent pregnancy, the chance of intrauterine pregnancy is nearly 49.3% (16) and an elective cesarean section is the best mode of delivery to avoid the risk of uterine rupture as accepted by most authors (17).

CONCLUSION

This case is reported because of its rarity. Ectopic pregnancy is per se a diagnostic challenge, but the rare sites where ectopic pregnancy implants further increases the risk to the woman because of the increased chances of delay in diagnosing the condition followed by delayed treatment. Abdominal pregnancy can be missed during antenatal care but high index of suspicion in cases of abnormal lie, displaced cervix and failed induction of labor can help in diagnosis of abdominal pregnancy. Confirmation of the location of pregnancy at the first booking ultrasound is very important. Early diagnosis and prompt surgical intervention definitely improves the morbidity and mortality in patients with abdominal ectopic pregnancy

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