Case Reports

Broad ligament ectopic pregnancy

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Abstract

Pregnancy in the broad ligament is a rare form of ectopic abdominal pregnancy with a high risk of maternal mortality. Ultrasound examination may help in the early diagnosis but mostly the diagnosis is established during surgery. We are reporting two cases of broad ligament pregnancy one diagnosed on ultrasound and the other was diagnosed intraoperatively. Both these patients had uneventful postoperative recovery.

Key words: broad ligament, ectopic pregnancy, ultrasonography.

Introduction

Abdominal pregnancies account for 1% of ectopic pregnancies and the maternal mortality rate has been reported to be as high as 20%^{1,2}. It may occur in any part of the abdomen but is common in pouch of Douglas and is rare in broad ligament. It presents as an acute abdominal emergency during pregnancy and the diagnosis is commonly achieved during surgical exploration. Though ultrasonography may at times suggest this possibility if there is high index of suspicion. We report two cases of broad ligament ectopic pregnancy.

Case1

A 30-year old primigravida was admitted in the gynae emergency with severe abdominal pain and vaginal bleeding for one day. She had amenorrhoea of 10 weeks. There was history of intake of some oral pill for medical abortion followed by dilatation and curettage done 15 days back. No ultrasound examination was done at that time. She had been married for two and half years and had conceived spontaneously. Her past and family history was

unremarkable. On examination, she was found to have severe pallor with tachycardia. Her blood pressure was 100/60 mmHg. There was marked tenderness along with guarding and rigidity of the lower abdomen. Pelvic examination revealed normal size uterus with marked tenderness in right fornix and no other palpable masses. Ultrasound examination revealed bulky uterus with empty cavity with a well defined gestation sack (Figures 1 and 2) and a live fetus of 10 weeks seen posterior and right to the uterus. Free fluid was also present in the abdominal cavity.

Figure 1. Empty uterine cavity.

Figure 2. Gestation sac of 10 weeks seen posterior and to the right of the uterus.

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She was taken up for emergency laparotomy, which revealed gestational sack outside the uterus, in the posterior leaf of broad ligament below the right ovary. Right salpingo-oophorectomy was done as omentum was adherent to the sack and to the tubes. Hemoperitonium with 600 grams clot was present. The left tube was adherent to the left ovary. Two units of blood transfusion was given to the patient. She recovered fully within one week and was discharged. She is on close OPD follow up and is doing well.

Case 2

A 29-year old, gravida⁻², para⁻¹, female presented with a history of pain in the abdomen and recurrent vomiting for two days and abdominal distension for one day. Her last menstrual period had been 18 weeks earlier and the obstetrics history revealed one full term normal delivery 10 years back. Since her last delivery she had an IUCD inserted for 5 yrs which was removed 5 yrs back and she was not using any method of contraception since then. There was a past history of abdominal tuberculosis diagnosed 11 yrs back for which she took anti-tubercular treatment for 9 months. Her menstrual periods are irregular with 40 - 90 day cycles and normal flow lasting 5-6 days. Her family history was unremarkable. Physical examination revealed blood pressure of 110/70 mm Hg, pulse rate of 100/min. There was marked tenderness all over her lower abdomen, The abdomen was distended with uterus 16 week size. Per vaginal examination revealed a very tender cystic mass occupying pelvis on the left side. Uterus was pushed up and anteriorly. Her haemoglobin was 6.7gm%, TLC 10,300/ μ l, platelet count of 308,000/ mm^3 . Urine pregnancy test was positive and transvaginal ultrasonography demonstrated single viable extrauterine fetus in crumpled state confirming to gestational age of 16 weeks and 3 days. The placenta was anterior in peritoneal reflection and free fluid was noted in the abdominal cavity. The uterus was bulky with thick endometrium.

From these clinical and ultrasonographic findings, a pregnancy in the broad ligament was diagnosed. Emergency laparotomy was performed. An ectopic pregnancy in the left broad ligament forming a cystic mass and adherent to the intestines was seen (Figures 3 and 4). Adhesions were present all over the abdomen including the subdiaphragmatic space. Hemoperitoneum of 1.5 liters was present. The uterus was slightly enlarged, right fallopian tube and ovary appeared normal. The left fallopian tube and ovary were adherent to the mass. Left salpingo-oophorectomy with surgical removal of the left broad ligament ectopic pregnancy was done. The patient was transfused three units of blood. Patient had an uneventful recovery and was discharged on the fifth postoperative day. She was well at 6 week follow up.

Figure 3. 18 weeks fetus in left broad ligament.

Figure 4. Normal uterus and adnexae.

Discussion

Broad ligament ectopic pregnancy is a rare but life threatening condition. The abdominal pregnancies account for 1% of ectopic pregnancies. Maternal mortality is as high as 20%. It is either due to primary implantation of the zygote on the broad ligament or followed by secondary implantation to fallopian tube, ovary or other peritoneal surface.

The risk factors include a history of secondary infertility, pelvic inflammatory disease, use of intrauterine devices, use of progesterone only pills, a previous history of ectopic pregnancy and endometriosis³. The risk factors in the second case was previous history of abdominal tuberculosis as was evident intraoperatively where adhesions were present all over even in the sub diaphragmatic space and also a previous history of IUCD insertion. There were no apparent risk factors in the first case.

There is a difference in the clinical presentation of abdominal and tubal pregnancy. There are various clinical presentations reported in the literature but a dull lower abdominal pain during early gestation is common. This has been attributed to the placental

separation, tearing of broad ligament and small peritoneal haemorrhage^{4,5}. Both of our patients presented with severe abdominal pain. Vaginal bleeding is also a common feature reported in upto half of the patients as reported by Hallatt and Grove⁶. One of our patients had vaginal bleeding along with severe abdominal pain. This bleeding is reported to be due to breakdown of decidual casts^{3,4}.

Ultrasound is the investigation of choice for diagnosis. In both the cases, the diagnosis was suspected on ultrasound. In the second case fetus was seen separate from the uterus on ultrasonography. It has been described in the literature that if there is no intrauterine pregnancy on ultrasonography and the ectopic sac is beside the lower part of uterus, a strong suspicion of broad ligament ectopic should be considered. MRI provides additional information and may help in surgical planning by evaluating the extent of uterine and mesenteric involvement^{7,8}.

The management is exploratory laparotomy. However, stable patients with early gestation can be considered for laparoscopic removal for small broad ligament pregnancies⁹. Conservative management or medical management is not recommended for broad ligament ectopic if the diagnosis is certain. Both our patients underwent laparotomy with excision of the mass along with salpingo-oophorectomy.

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