

Case Report

Cornual Pregnancy: A Case Report

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Abstract :

Ectopic pregnancy is a condition where gestation sac is located outside the uterine cavity; it is a major life threatening situation in early pregnancy. A cornual pregnancy is an ectopic pregnancy that develops in the interstitial portion of the fallopian tube invading through the uterine wall. As myometrium is more distensible fallopian tube cornual pregnancies often rupture later than other tubal pregnancies. Cornual pregnancy is rare and carries grave consequences to both mother and fetus. Here a case report has been presented where the patient was admitted in Faridpur Medical College Hospital. The case was presented with intra-abdominal haemorrhage at second trimester. In this cases investigation missed the diagnosis, final diagnosis was only made after laparotomy. The need for clinical suspicion and role of ultrasonography, resuscitation and laparotomy is necessary to prevent catastrophe.

Key words : Cornual pregnancy, ruptured ectopic pregnancy.

Introduction :

Cornual ectopic or interstitial pregnancy is a rare form of ectopic pregnancy that implants and develops in the intrauterine portion of fallopian tube and invades through the uterine wall. Cornual pregnancies often rupture later than other tubal pregnancies because the myometrium is more distensible. The incidence of cornual pregnancy is difficult to calculate. In general population, the incidence of ectopic pregnancy is about 2%¹. Interstitial pregnancies account for 2-4 % of ectopic pregnancies and that 20 % of cases that advance beyond 12 weeks of gestation end in rupture². Here we report a case, which was admitted in Faridpur Medical College Hospital, where cornual pregnancy was diagnosed after laparotomy. In that patient cornual pregnancy was ruptured and profound hemorrhage occurred.

Case Report :

A 25-year-old lady, para-1 at her 16 weeks of pregnancy was referred to the Obstetric and Gynae emergency of Faridpur Medical College Hospital from Madaripur Health Complex. The lady had a previous uneventful vaginal delivery about 3 years back. She was not in regular antenatal check-up. She developed abdominal pain and went to a local doctor and prescribed some drugs then pain subsided. She was

advised ultrasonography (USG); it showed a pregnancy of about 16 weeks. The lady had attack of abdominal pain several times at few days interval. After some days, she developed lower abdominal pain which was acute on onset, severe lancinating in nature starting from lower abdomen then spreading all over the abdomen. She was advised USG of lower abdomen and finding was that there was huge collection in pouch of douglus and also in hepatorenal pouch, with fetus outside uterus with a biparietal diameter of about 16 weeks. On examination, the lady was in hypovolemic shock with severe pallor and rapid feeble pulse. The abdomen was tense and distended and the uterine size was not made out. Pelvic examination revealed extreme paleness of vagina and fullness in the fornices. There was no vaginal bleeding. As the patient was in shock, she was taken for immediate laparotomy after resuscitation. On opening the abdomen, the peritoneal cavity was filled with huge amount of fresh and clotted blood. The uterus on the right side of the cornu was found ruptured. A fetus was found in the peritoneal cavity and the cord was attached with placenta which was protruding through the ruptured cornu (Figure-1). The left cornu of the uterus was normal in size. The right cornu was resected and repaired. But bleeding continues from right cornu. So subtotal-hysterectomy was done. Per-operatively, the patient received 4 units of whole human blood. Her post-operative period was uneventful and she was discharged on 5th post-operative day in good condition.

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Figure 1 : Fetus with placenta.

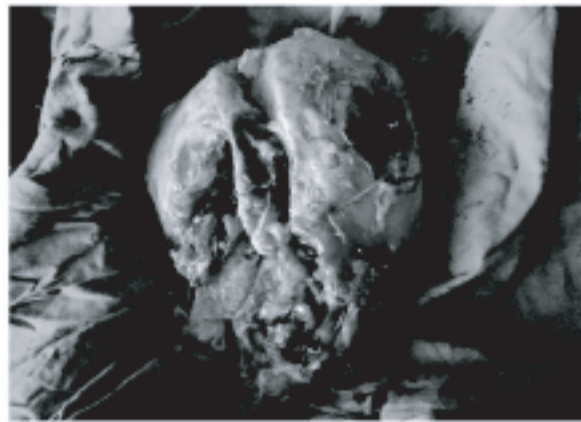


Figure 2 : Uterus after subtotal hysterectomy.

Discussion :

Interstitial (cornual) pregnancy is a rare type of ectopic pregnancy (EP), accounting for 2-4% of all tubal pregnancies. The surrounding myometrial tissue allows progression of the pregnancy into the second trimester but rupture at such an advanced gestation may result in catastrophic haemorrhage with a mortality rate of up to 2%. This high mortality rate is partially due to the difficulty in diagnosis as well as the speed of haemorrhage². The risk factor of cornual pregnancy as ectopic pregnancy are history of pelvic inflammatory diseases, history of previous ectopic pregnancy, history of tubal and other surgery and conception after tubal ligation. Salpingectomy, salpingostomy, assisted reproductive technology, or difficulties during the embryo transfer procedure are likely to be other risk factor for cornual pregnancy³⁻⁵. As cornual pregnancies are located close to the uterine blood supply, rupture of cornual pregnancies may cause severe bleeding. This bleeding can be excessive, leaving hysterectomy as the only option.

The clinical finding of cornual pregnancy depends upon whether or not it is ruptured. In unruptured case patient may present with abdominal pain or pervaginal bleeding or both. History of repeated abdominal pain at few days interval is also noticed. Ruptured cases usually present with severe abdominal pain with features of hemodynamic instability. Trans-vaginal ultrasound scan is the corner stone for the early diagnosis of cornual ectopic. The eccentric position of the gestational sac with an empty uterine cavity and the presence of a thin (less than 5mm) or even absent myometrium surrounding the sac are highly suggestive of cornual ectopic pregnancy. The diagnosis may be helped with the use of Doppler studies showing increase vasculature often as a ring around the gestational sac. In experienced hands, trans-vaginal ultrasound can establish diagnosis of cornual ectopic in nearly 71% of cases⁶.

In normal pregnancy, β -hCG concentration in first trimester increase rapidly, doubles for 2 day. Ectopic pregnancy could be found with increased, decreased, or steady β -hCG level⁷. If β -hCG serum level is low (<1000 IU/l), then it is associated with higher risk to EP. In cornual ectopics, there are reports of doubling of serum β hCG, therefore the value of performing serial serum β hCG is doubtful and the results should be interpreted with caution⁶.

When an unruptured cornual pregnancy is diagnosed, there is a variety of conservative management options, such as medical management with methotrexate applied by parenteral route or directly injection of methotrexate or potassium chloride into the cornual gestational sac with ultrasonography or hysteroscopic guidance, or laparoscopic cornual resection. Selective uterine artery embolization when conservative treatment with uterine preservation is desired are also practiced in some centres^{8,9}. The success of ectopic pregnancy treatment mostly depends on the serum concentration of β -hCG. A meta-analysis shows that the resolution has a reverse association with the level of β -hCG and the increasing level of β -hCG has a correlation with the failure of treatment. In a ruptured case, cornuotomy or cornual resection and more radically a subtotal hysterectomy done as a life saving condition when other methods has been tried and failed. In cornuotomy or cornual resection, the usage of diathermy or harmonic scalpel in the dissection can help in the reduction of blood loss. A minimum amount of tissue must be excised in order to prevent possible uterine rupture in the future. The round ligament could be used to cover the cornual resection site to reduce post-operative adhesions¹⁰. Methotrexate administered prior to surgery seen to be associated with less bleeding at the time of cornual incision. After cornual resection caesarean section is usually done in next pregnancy due to the risk of

uterine rupture¹¹. Uterine artery ligation may help to conserve the uterus in ruptured cornual ectopic¹². Laparotomy with presence of senior gynaecologist is necessary in situation where the bleeding might be severe and life threatening because of the enormous blood supply to the uterine cornu especially when the gestation is advanced at time of ectopic rupture. Serial serum β -hCG should be measured after any conservative surgical treatment; a declining titer is essential and needs monitoring at intervals till resolution. Cornual ectopics are associated with high risk of rupture as late as 10-16 weeks. It can cause profuse intraperitoneal bleeding which can be life threatening. Therefore, expectant management has no place in confirmed cornual ectopic¹³. In our case, the cornu was found to be largely ruptured with massive hemorrhage in the abdominal cavity. At first cornual resection tried but bleeding was not controlled and subtotal hysterectomy was done. In this case, the patient's earlier scans missed the diagnosis. The later ultrasonography after rupture showed rupture ectopic pregnancy with a fetus of about 16 weeks which was clinically suspected as cornual pregnancy and diagnosis was confirmed only after laparotomy.

Conclusion :

Cornual pregnancy in most cases is associated with a severe catastrophe. Clinical suspicion, ultrasonography in expert hand can confirm diagnosis. Every effort should be made to diagnose the case early before the catastrophe.

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