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Ectopic Pregnancy at an Unusual Site: A Cornual Ectopic Pregnancy - A Case Report

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Abstract: ***Background: Ectopic pregnancy is a condition where gestation sac is located outside the uterine cavity; it represents a serious hazard to a woman's health & reproductive potential in early pregnancy, which requiring prompt recognition and early aggressive intervention.When the fertilized egg attaches itself outside in place other than inside the uterus (It is the consequence of an abnormal implantation of the blastocyst). 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 Zonal Military Hospital, Jammu. The case was presented with bleeding per vaginum for 3days at first trimester referred from peripheral field hospital with ultrasound suggestive of right sided cornual pregnancy of nine weeks. The need for clinical suspicion and role of ultrasonography, anesthesia and laparoscopic guided suction & evacuation done followed by ultrasound guided suction & evacuation done. However, with the advancement and expertise in the field of radiology and early diagnosis can be made which can contribute towards more conservative management of such cases.***

Keywords: Cornual pregnancy, Laparoscopy, Ectopic pregnancy, Ultrasonography

1. Introduction

Cornual ectopic 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 world wide incidence of ectopic pregnancy is about 3-4%[1]. Cornual pregnancies account for 2-2.5 % of ectopic pregnancies and that 20% of cases that advance beyond 12 weeks of gestation end in rupture[2]. Here we report a case, which was admitted in Military Hospital, where suspected right-sided cornual pregnancy was diagnosed on ultrasonography at peripheral field hospital and referred for its further management.

2. Case Report

A 25-year-old lady, Gravida-2, Abortion-1 at her 9 weeks of pregnancy was referred to the Obstetrics and Gynaecology department of Military Hospital, Jammu from peripheral field Hospital. The lady had a previous spontaneous abortion about 1 year back. She developed abdominal pain and with history of missed periods reported to field hospital. She found to be pregnant and her basic pelvic ultrasonography was done and suspicion of right sided cornual pregnancy diagnosed and referred to Zonal Military Hospital at Jammu for further evaluation and management. Patient did not report immediately. After 3 days she developed bleeding per vaginum on and off and she reported to Military Hospital Jammu. Her detailed evaluation done and repeat ultrasound was done and confirmation of right sided cornual live ectopic pregnancy was done. Based on her clinical findings and ultrasound report, a diagnosis of right cornual ectopic pregnancy was made and the decision of Laparoscopic guided Suction and Evacuation was made. The consent was taken by the attendant before proceeding with the surgery and 2 PRBC and were arranged.With this conservative approach, we successfully saved fallopian tube and uterus of patient and intra-op ultrasonography guided suction and evacuation also carried out for more confirmation of complete evacuation of product of conception. Post-operatively she was kept in ward for 3 days and discharged on day4. Patient was serially monitored for beta HCG values till come down at non pregnant levels.

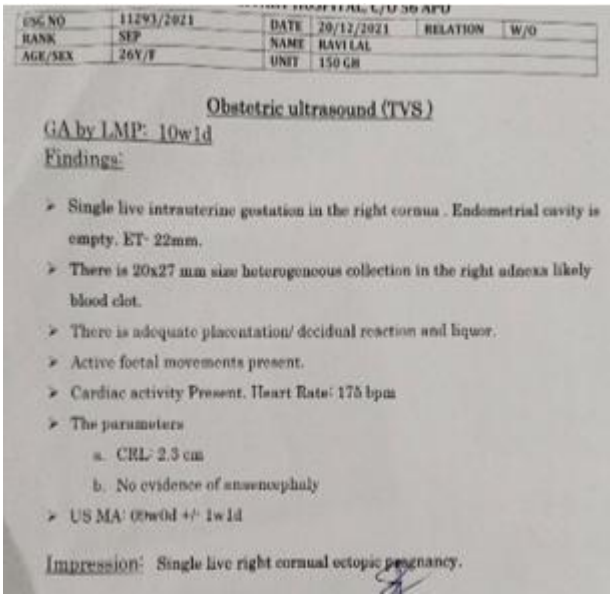


Figure 1: Ultrasonography report suggestive of Right Cornual ectopic pregnancy

Figure 2: Laparoscopic view of right cornual pregnancy with proper dimple of fundus of uterus.

Figure 3: Ultrasound guided suction and evacuation done

Figure 4: Product of conception removed (Weight-100 grams)

3. Discussion

The cornual pregnancy is rare type of ectopic pregnancy accounting for 2-2.5% of tubal pregnancies. The surrounding myometrial tissue allows progression of pregnancy into second trimester, but rupture at such advanced gestation may results into catastrophic haemorrhage with mortality rate upto 2%. The high mortality rate due to difficulty in diagnosis as well as speed of haemorrahge[2].

The risk factor for cornual pregnancy as ectopic pregnancy are history of pelvic inflammatory diseases, history of previous ectopic pregnancy, history of tubal and other surgeries and conception after tubal ligation. Salphingectomy, salphingostomy, assisted reproductive technology or difficulties during embryo transfer procedures are likely to be other risks factors for cornual pregnancy[3-5].

The clinical finding of cornual pregnancy depends on whether or not it is ruptured. In un-ruptured case patient may present with abdominal pain or per-vaginal 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 haemodynamic instability. Trans-vaginal ultrasound scan is the cornerstone for the early diagnosis of cornual ectopic. The eccentric position of gestational sac with an empty uterine cavity and 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 pregnancy in nearly 71% of cases[6].

In normal pregnancy, beta-HCG values increases rapidly in first trimester doubles for every 48 hours. Ectopic pregnancy could be found with increased, decreased or steady beta-HCG level[7].

If beta-HCG levels serum level is low (<1000IU/L), then it is associated with higher risks to ectopic pregnancy. In cornual pregnancy, there are reports of doubling of serum beta-HCG, therefore the value of performing serial serum beta-HCG is doubtful and results should be interpreted with caution[8].

When an un-ruptured cornual ectopic pregnancy is diagnosed, there is variety of conservative management options, such as medical management with 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 beta-HCG. The meta-analysis shows that the resolution has a reverse association with the level of beta-HCG and increasing level of beta-HCG has a correlation with the failure of treatment. In ruptured cornual case, Cornuotomy or Cornual resection and more radically subtotal hysterectomy done as life-saving condition when other method has been tried and failed. 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 adhesions[10].

Methotrexate administered prior to surgery found 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 rupture[11].

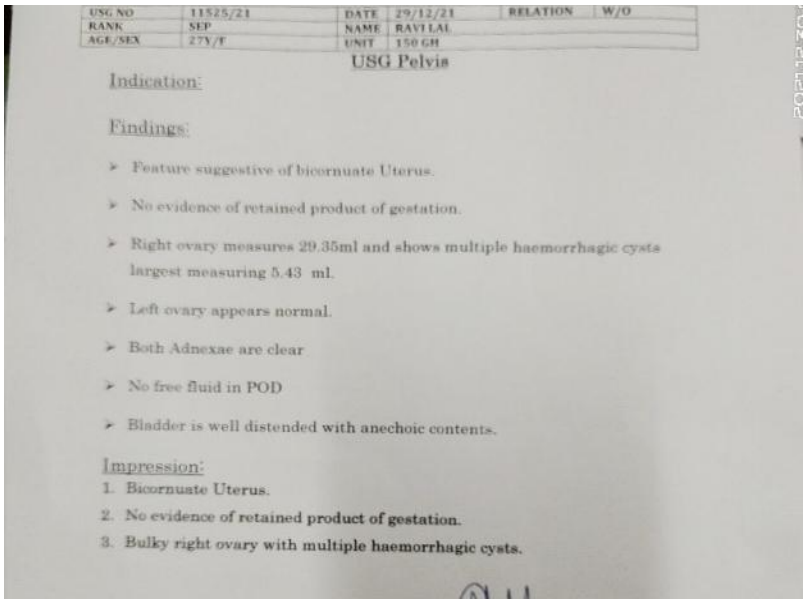
Uterine artery ligation may help to conserve the uterus in ruptured cornual ectopic[12].

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 ß-HCG should be measured after any conservative surgical treatment; a declining titer is essential and needs monitoring at intervals till resolution. Cornual ectopic are associated with high risk of rupture as late as 10-16 weeks. It can cause profuse intra-peritoneal bleeding which can be life threatening. Therefore, expectant management has no place in confirmed cornual ectopic[13].

Traditionally, the treatment of interstitial and cornual pregnancy has been laparotomy, cornual resection or hysterectomy[14].

However, in hemodynamically stable patients, conservative measures may be attempted including medical management and laparoscopy such as laparoscopic cornual resection, laparoscopic cornuostomy or hysteroscopic removal of interstitial ectopic tissue, unilateral uterine artery ligation has been tried[15].

In this case, the right sided cornual live pregnancy of nine weeks confirmed by ultrasound and planned for conservative approach to save entire uterus for future pregnancy with decision of laparoscopic guided suction and evacuation followed by confirmation of suction of product of conception with ultra-sound guided suction and evacuation done with post-operative serial monitoring of beta HCG value till non-pregnant level. Post-operative period confirmation of complete evacuation of uterine cavity done with ultrasonography and diagnosis of bicornuate uterus were done.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USG Pelvis

Indication:

Findings:

- Feature suggestive of bicornuate Uterus.
- No evidence of retained product of gestation.
- Right ovary measures 29.35ml and shows multiple haemorrhagic cysts largest measuring 5.43 ml.
- Left ovary appears normal.
- Both Adnexae are clear
- No free fluid in POD
- Bladder is well distended with anechoic contents.

Impression:

1. Bicornuate Uterus.
2. No evidence of retained product of gestation.
3. Bulky right ovary with multiple haemorrhagic cysts.

Figure 5: Post-operative follow up ultrasonography report

4. Conclusion

The terms angular and cornual pregnancy have been used to describe pregnancies located near the uterine cornual region, but still within the uterine or endometrial cavity. Consistent and dependable diagnosis of eccentric intrauterine and interstitial ectopic pregnancies remains a challenge, but has and will continue to improve with the advancement of ultrasound technology. 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 as early before the catastrophe.

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Ethical approval: Not required.

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