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Case Report

Misdiagnosis of interstitial pregnancy followed by circlage operation and failed induced midtrimester abortion: a case report

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ABSTRACT

Interstitial pregnancy is rare form of ectopic pregnancy that can expand up to 18 weeks leads to massive haemoperitoneum hence early diagnosis is imperative to decrease mortality and morbidity. Present case diagnosed as interstitial pregnancy at laparotomy when she had taken for hysterotomy after two failed courses of medical abortion. Clinicians should bear in mind the limitations of various investigations and should have a higher degree of suspicion for interstitial pregnancy Any deviation from normal response to administration of medical abortifacient, such as failure to abort, should instigate the diagnosis of ectopic (interstitial) pregnancy by expert radiologist.

Keywords: Angular pregnancy, Cornual pregnancy, Haemorrhage, Interstitial pregnancy, Maternal mortality, Ultrasonography

INTRODUCTION

Ectopic pregnancy is defined as implantation anywhere other than the endometrial cavity of the uterus. It is the leading cause of maternal death in the first trimester. When the gestational sac implants in the myometrial part of the proximal fallopian tube, it is called interstitial pregnancy. Angular pregnancy is an important differential diagnosis, where the embryo implants in the lateral angle of the uterine cavity. While angular pregnancy is present medial to the round ligament, interstitial pregnancy implants lateral to the round ligament. The term 'cornual pregnancy' often used interchangeably, refers to pregnancy in 1 horn of duplication anomaly (septate or bicornuate uterus). Important risk factors for interstitial pregnancy include prior history of ectopic pregnancy, previous ipsilateral or bilateral salpingectomy, tubal surgery, ovulation induction conception after in-vitro fertilization and

history of STDs etc.¹ Interstitial pregnancy has increased capability to expand, remain asymptomatic for 7-16 weeks of gestation.²

CASE REPORT

A 24-year-old lady G10P2L0A7, with four and half month amenorrhoea, presented in our out patient Department for routine antenatal checkup. The patient had bad obstetric history with 7 second trimester abortions, 1 stillbirth and 1 Intrauterine fetal death (Fresh still birth) for which patient underwent LSCS due to transverse presentation of the baby. On examination, patient was conscious and oriented. Her general examination was normal. Her pulse rate was 72/min and BP were 90/60 mmHg, respiratory rate is 18/min. Examinations of respiratory, cardiovascular and central nervous system revealed no abnormalities. On per abdominal examination, abdomen was soft, nontender

and uterus was 16 weeks size. As she was a case of bad obstetrics history she was evaluated for the same. Her thyroid status, coagulation profile, VDRL, fasting and post prandial blood sugar, glycosylated Hb, antiphospholipid antibodies and other routine investigation were within normal limit. Ultrasound findings was single intrauterine fetus at 16 weeks 2 days gestation with no congenital malformation and with cervical length was 2.5 cm. By her obstetric history and USG finding she was diagnosed as case of cervical insufficiency and McDonalds cervical stich applied and discharged well. She presented after 10 days in out-patient department with complains of leaking per vagina and dysuria since one day. On examination, patient was conscious and oriented. Her general examination was normal. Her pulse rate was 76/min and BP was 100/60 mmHg, respiratory rate is 18/min. Examinations of respiratory, cardiovascular and central nervous system revealed no abnormalities. On per abdominal examination, abdomen was soft, nontender and uterus was 18 weeks size. On per speculum examination, leaking was noted, liquor was clear. Ultrasound findings was single intrauterine fetus at 17 weeks 2 days gestation with no definite liquor pocket and decreased end diastolic flow on umbilical artery doppler. Patient was counselled regarding expectant management as well as induction of abortion as further treatment options. Patient opted for induction of abortion, Her McDonald stitch was removed following which she was advised medical termination of pregnancy (Tablet Mifepristone 200 mg orally+ Tab Misoprostol 400 ug sublingually after 48 hours, tab misoprostol 200 mg repeated 6 hourly for four doses). Patient failed to abort with above treatment leading to failure of termination of pregnancy. A second dose of medical abortifacient (same regime) was repeated but resulted in failure. Patient refused for further medical intervention and was willing for surgery (Hysterotomy). Patient was taken up for hysterotomy. Intraoperative findings were an asymmetrically enlarged uterus with bulging of the right cornua of uterus (Figure 1).

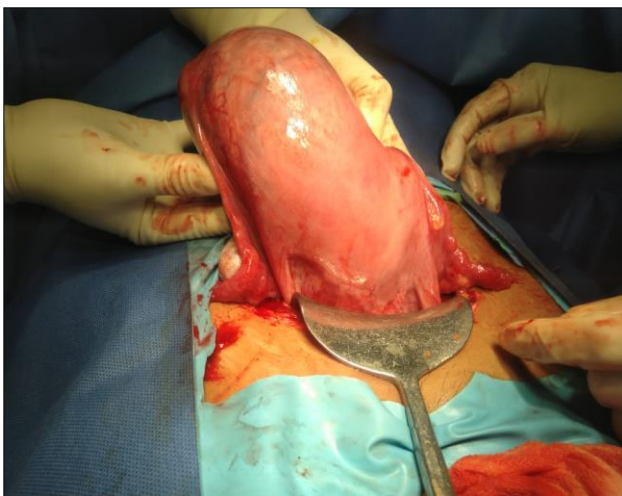


Figure 1: A gourd shaped bulge of right cornua of unruptured interstitial pregnancy.

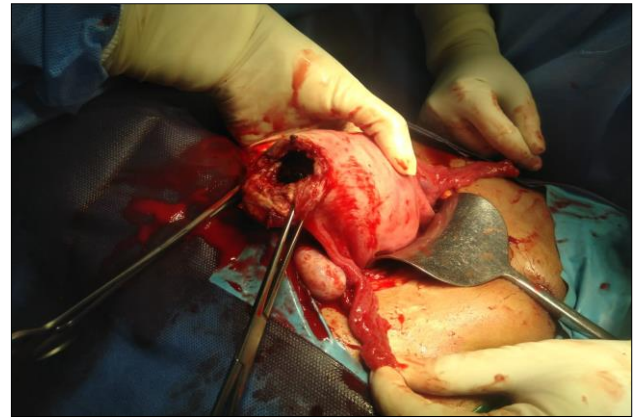


Figure 2: Right cornua after incision and removal of fetus and placenta (Cornuostomy).



Figure 3: 18 weeks fetus removed from unruptured interstitial pregnancy.

It was diagnosed as an unruptured right interstitial pregnancy. The right cornual bulge was incised (Cornuostomy), followed by evacuation of the fetus, placenta and membranes (Figure 2, 3) and subsequent closure of uterine incision. Both fallopian tubes and ovaries were normal. Her postoperative period was uneventful and she discharged well.

DISCUSSION

The diagnosis of interstitial pregnancy is a challenging task. The rare number of cases as well as lack of definitive criteria for diagnosis of interstitial pregnancy, hence, makes the diagnosis cumbersome. In present case she underwent USG thrice and diagnosis of interstitial pregnancy was missed. She underwent an unnecessary surgical intervention (Circage) due to missed diagnosis. In a retrospective study on ectopic pregnancies, 2.9% of ectopic pregnancies were interstitial.³ Interstitial pregnancy usually present late and can lead to massive amount of haemoperitoneum due to proximity of gestational sac with intramyometrial arcuate vasculature and larger size but early presentations with

rupture at one month of amenorrhoea has also been reported.⁴ For preoperative diagnosis of interstitial pregnancy a focused and expertly performed ultrasound is recommended.

Ultrasonographic findings include

- Eccentrically located gestational sac with respect to endometrial cavity. (sac seen separately more than 1cm from endometrial cavity)
- Thinned surrounding myometrium (less than 5 mm)
- An echogenic line can be followed from endometrial cavity to ectopic sac known as interstitial line sign. It has a sensitivity of 40% and specificity of 88-93%.⁵

The 3D ultrasound should be performed in every case of questionable implantation site as it provides improved spatial orientation of implantation site to endometrial cavity. In our case 3D USG was not performed. MRI can be considered when ultrasound results are equivocal. In our case, the diagnostic pitfall was identifying the pregnancy as intrauterine pregnancy, due to which the patient went unnecessary surgical intervention and was further treated for medical termination of pregnancy.

In two other case studies also, women presented with 18 weeks pregnancy and severe oligohydramnios with failed medical termination of pregnancy eventually diagnosed as interstitial pregnancy.^{5,6} According to one study correct diagnosis could not be made during the first presentation in 41.7% of cases of interstitial pregnancy. Delay in making the correct diagnosis contributed to rupture of interstitial pregnancy in 40% of rupture of interstitial pregnancy.³ In 6 women evacuation was performed. This shows the difficulty in differentiating between interstitial and intrauterine pregnancy despite advances in sonographic skills and equipment.

In present case, induction of medical abortion was failed twice, hence patient was taken for hysterotomy. Our patient was lucky enough that in spite of undergoing circlage and 2 courses of medical abortion she did not undergo rupture of 18 weeks of interstitial pregnancy which can lead to massive life-threatening haemoperitoneum. According to one study a mortality rate of 2-2.5% in interstitial pregnancy, which is seven times the average for all ectopic pregnancies.⁷

We performed cornuostomy instead of corneal resection. More recent studies favour cornuostomy over corneal resection. Cornuostomy excises the interstitial pregnancy, while preserving uterine architecture and maintaining fertility.

MacRae et al, and Watanabe et al, also, performed cornuostomies for larger interstitial pregnancies.^{8,9}

CONCLUSION

With an increased incidence of ectopic as well as interstitial pregnancies, clinicians should bear in mind the limitations of various investigations and should have a higher degree of suspicion for interstitial pregnancy. Such cases should undergo further evaluation by expert radiologist. Any deviation from normal response to administration of medical abortifacient, such as failure to abort, should instigate the diagnosis of ectopic (interstitial) pregnancy.

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