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Case Report

Broad ligament ectopic pregnancy: a dilemma to diagnose

Namrata Saxena^{1*}, Neeta Bansal¹, Pradeep Singhal², Monika Ramola¹

¹Department of Obstetrics and Gynecology, ²Department of Surgery, SGRRIM and HS, Dehradun, Uttarakhand, India

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***Correspondence:**

Dr. Namrata Saxena,

E-mail: msnamrata30@gmail.com

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ABSTRACT

Broad ligament ectopic pregnancy is a rare and serious form of extrauterine pregnancy with a high risk of maternal mortality. There are no specific clinical features. Ultrasonography may help in diagnosis, but definitive diagnosis is made only during surgery. Authors are reporting a case of 30 years female G₃P₁L₁A₁ seven weeks pregnancy with previous lower segment cesarean section and previous history of right sided salpingectomy with no complaints. Ultrasound was advised to know the location of sac this time, in which, she was diagnosed as a case right sided unruptured live ovarian ectopic pregnancy. On examination, signs and symptoms of ectopic pregnancy were absent. On laparoscopy, she was diagnosed as a case of right sided live unruptured broad ligament ectopic pregnancy as her right ovary was absent because of previous surgery. With advances in sonography and laparoscopic skills, more cases can be diagnosed in the first trimester and can be safely managed laparoscopically.

Keywords: Broad ligament, Ectopic pregnancy, Laparoscopy

INTRODUCTION

Ectopic pregnancy is a type of pregnancy that occurs outside the normal uterine cavity. Fallopian tube is the most common site of ectopic pregnancy (95% cases) and abdominal account for 1%.¹ Abdominal pregnancy is a rare but potentially fatal form of ectopic pregnancy. Broad ligament ectopic pregnancy, also known as intra ligamentary pregnancy, is considered a kind of abdominal pregnancy with the gestational tissue implanted between the 2 layers of the broad ligament.²⁻⁴ It is a rare and serious form of extrauterine pregnancy. It has a reported incidence of 1 in 1,83,900 and occurs in about 1 in 245 ectopic pregnancies.⁴

The maternal mortality rate has been reported to be as high as 20%.⁵ This is because of massive haemorrhage from partial or total placental separation or rupture of gestational sac into peritoneal cavity. For an abdominal pregnancy, to reach advanced stage of gestation with

viable foetus is very uncommon. In recent years, more and more patients were diagnosed in first trimester. The clinical presentation of broad ligament ectopic pregnancy is highly variable and can range from asymptomatic early ectopic pregnancy to rupture in labor at term. Accurate preoperative diagnosis is difficult, and very often, definitive diagnosis can be ascertained only at the time of operation. Here, authors are describing a case of unruptured live broad ligament ectopic pregnancy which was diagnosed on laparoscopy.

CASE REPORT

A 30-year-old woman G₃P₁L₁A₁ consulted in routine antenatal OPD with 6weeks 2days pregnancy with previous LSCS. She had history of laparotomy and salpingectomy 4 years back. Ultrasound was advised at 7 weeks gestation to confirm location of gestational sac, in which, uterus was normal. No gestational sac was seen in the endometrial cavity.

Right ovary was bulky with evidence of an ill-defined gestational sac within right ovary. Single live embryo seen within gestational sac. CRL was 0.58cm (6 weeks 3 days). Fetal cardiac activity was present. Her serum β -hCG was 97,363mIU/ml. On examination, there were no signs and symptoms of ectopic pregnancy. As patient was asymptomatic, she was planned for laparoscopy. In preoperative findings, uterus was normal in size with normal contour. Left sided tube and ovary were normal while right sided tube and ovary could not be made out. Right sided uterine wall was totally adhered with pelvic wall. After separation of adhesions, a Budging area was seen between uterus and lateral pelvic wall (Figure 1).

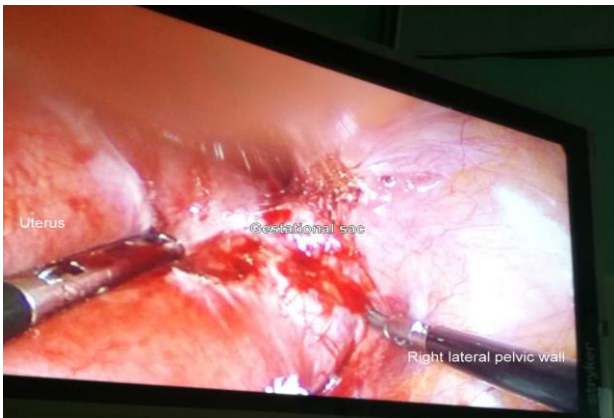


Figure 1: Per operative findings suggestive of gestational tissue between uterus and right lateral pelvic wall.

Gestational tissue was removed and sent for histopathological examination. Hemostasis achieved. Prophylactic injection methotrexate 50mg I/M was given on next day. Histopathological findings were consistent with ectopic pregnancy and no ovarian tissue was present (Figure 2).

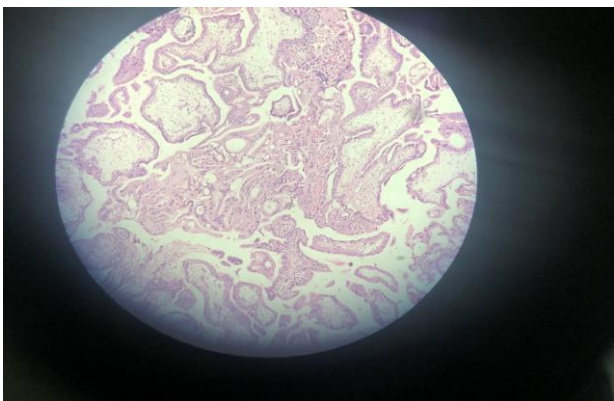


Figure 2: Histopathological findings.

Patient was discharged and put on regular follow up with serum β -hCG level. She was asked to bring documents related with previous surgery, which were suggestive of right sided salpingo-oophorectomy for tubo-ovarian mass 4 years back.

DISCUSSION

Broad ligament ectopic pregnancy is a rare but life-threatening condition. Maternal mortality is as high as 20%.⁴ It is either due to primary implantation of the zygote on the broad ligament or followed by secondary implantation from the fallopian tube, ovary or other peritoneal surface. In this case primary focus of ectopic pregnancy could not be found elsewhere except the broad ligament. The risk factors include a history of secondary infertility, use of assisted reproduction technologies, pelvic inflammatory disease, use of intrauterine devices, use of progesterone only pills, a previous history of ectopic pregnancy and endometriosis.⁵ There was history of laparotomy in this case. The clinical presentation of broad ligament ectopic pregnancy is highly variable and can range from asymptomatic early ectopic pregnancy to rupture in labour at term. 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.^{6,7} Vaginal bleeding is also a common feature reported in up to half of the patients.⁸ In this case, patient was asymptomatic, and it was difficult to diagnosed as a case of ectopic pregnancy on clinical examination. Ultrasound is the investigation of choice for diagnosis. 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. This case was misdiagnosed as ovarian pregnancy in place of broad ligament ectopic pregnancy. Unfortunately, no specific sonographic criteria have been established so far to aid in reaching this diagnosis. MRI provides additional information and may help in surgical planning by evaluating the extent of uterine and mesenteric involvement.^{9,10} The management is exploratory laparotomy. However, stable patients with early gestation can be considered for laparoscopic removal for small broad ligament pregnancies.¹¹ Conservative management or medical management is not recommended for broad ligament ectopic if the diagnosis is certain. With recent advances in laparoscopic surgery, most unruptured nontubal ectopic pregnancies can be managed safely laparoscopically.

CONCLUSION

The key to the management of broad ligament ectopic pregnancy involves a high index of suspicion, early diagnosis, and prompt surgery.

The occurrence of unusual ectopic pregnancy is likely to increase with the increasing use of assisted reproduction technologies. Clinicians should be aware of the possibility of broad ligament pregnancy in patients with known risk factors. With advances in sonographic diagnosis, laparoscopic instruments, and skills, a broad ligament pregnancy can be safely managed laparoscopically.

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