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Research Article

Broad ligament pregnancy a diagnostic dilemma: a case report

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ABSTRACT

Broad ligament pregnancy is one of the rarest forms of ectopic pregnancy with high risk of maternal mortality. Although ultrasonography is usually helpful in making the diagnosis but it is mostly established during laparotomy. 34 year old G2P1 with previous caesarean section reported at 8th month of pregnancy with inability to perceive foetal movements. Ultrasonography confirmed intrauterine fetal demise. Patient was taken for caesarean section after failed induction. Intraoperative diagnosis of broad ligament pregnancy was made and broad ligament along with fetus, sac, fallopian tube and ovary was excised. Post-operative period was uneventful.

Keywords: Broad ligament pregnancy, 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.³ Ectopic pregnancy in the broad ligament is a retroperitoneal abdominal pregnancy, in which the foetus or gestational sac develop within the leaves of the broad ligament.⁴ It usually results from fallopian tube rupture nearing mesosalpinx and then the pregnancy continuing within the leaves of broad ligaments. It has vivid presentations, may present as lower abdominal pain, an abnormal lie, placental insufficiency, foetal death or acute abdomen due to rupture of gestational sac with haemorrhage into the peritoneal cavity. We are reporting a case advanced broad ligament pregnancy where clinical as well ultrasonography did not help us to diagnose it and we could only detect it intra-operatively.

CASE REPORT

A 34-year-old, gravida 2, para 1 with one live issues with previous 1 caesarean section, ten years back due to breech was referred to our hospital from a peripheral clinic, with 30 weeks period of gestation and inability to perceive fetal movement for last two days. On examination height of uterus was 24 to 26 weeks and fetal heart sound was not localized by stethoscope. Her ultrasound was done and was suggestive of intrauterine fetus, with oblique lie, without cardiac activity. On per vaginal examination cervical os was closed, uneffaced and the presenting was high up. Her haemoglobin was 10.1 g/dL and other haematological and biochemical parameters including coagulation profile were within normal range. Earlier, the patient had an ultrasound at 18th weeks of gestation showing normal intrauterine pregnancy. Patient was induced with intra-cervical Foley's catheter. Uterine contraction did not establish and Bishop Score did not improve even after giving maximum dose of oxytocin infusion. She was taken up for caesarean in view of failed induction.

Intra-operatively, the uterus was found to be about 8 to 10 week size lying on the anterior and left inferolateral aspect of the amniotic sac. The sac was found enclosed in the right broad ligament. On the left side, fallopian tube and ovary were normal. The diagnosis of right broad ligament pregnancy was made. The sac was encompassed by dense omental and bowel adhesions and left sided tube and ovary could not be visualized separately. Adhesions were removed by blunt and sharp dissection. Anterior wall of the sac was cut open and a macerated dead male fetus weighing 735 Gms was delivered. The placenta was attached to the lateral and posterior wall of the sac and the sac was not communicating with the uterine cavity. The sac was excised and the margins were repaired. One unit of whole blood was given intra-operatively and patient stood the procedure well.

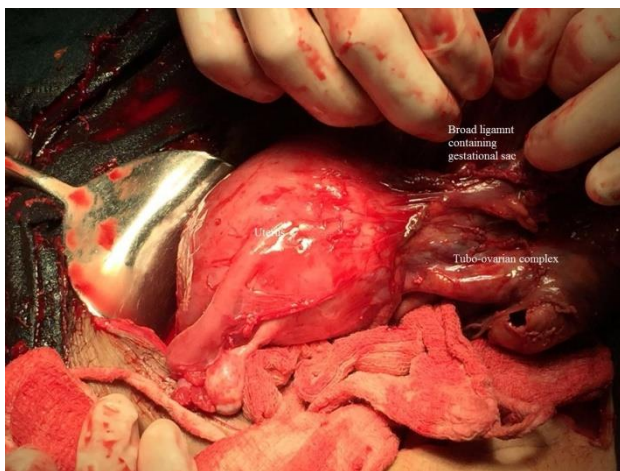


Figure 1: Right broad ligament containing gestational sac.

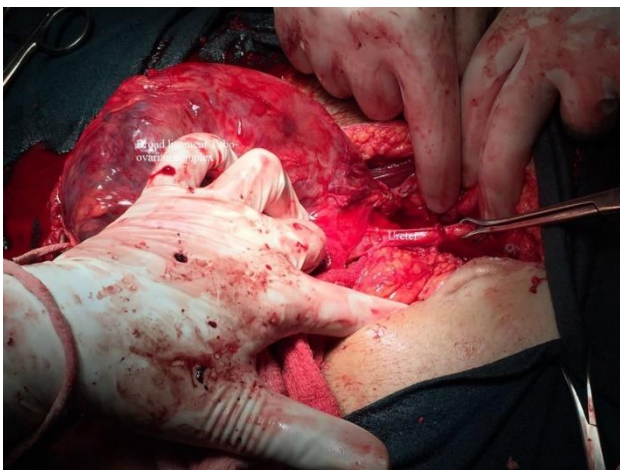


Figure 2: Right ureter in relation to broad ligament-tubo-ovarian complex.

DISCUSSION

Broad ligament pregnancy is a rare form of ectopic abdominal pregnancy. Incidence is reported as 1 in 300 ectopic pregnancies.⁵ A broad ligament pregnancy

usually results from trophoblastic penetration of tubal pregnancy through the tubal serosa and into the mesosalpinx, with secondary implantation between the leaves of broad ligament. Rare types of secondary abdominal pregnancies can occur after spontaneous separation of an old caesarean section scar, after uterine perforation during a therapeutic or elective abortion, and after subtotal or total hysterectomy.⁶

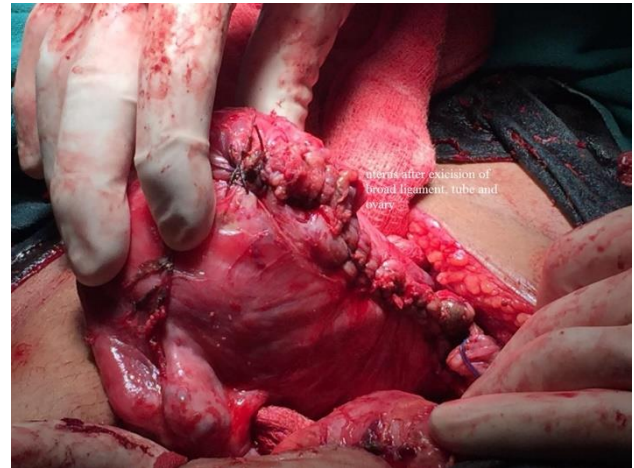


Figure 3: Final repair after excision of broad ligament-tubo-ovarian complex.

Pelvic inflammatory disease, use of intrauterine devices, use of progesterone only pills, a previous history of ectopic pregnancy, abdominal tuberculosis and endometriosis⁷ are the various risk factors involved.

Presentation of abdominal pregnancy can be varied from mild abdominal discomfort, small amount of vaginal bleeding, placental insufficiency leading to fetal demise to catastrophic internal haemorrhage, manifesting with acute abdomen and shock. Careful clinical examination and observation may help in diagnosing the pregnancy. As in our case the patient presented with loss of fetal movements. High up presenting part with failure to initiate uterine contraction despite a maximum dose of oxytocin could have raised the suspicion.

Ultrasonography is the investigation of choice for diagnosis. Case reports by Sharma and Rudra had correctly diagnosed the abdominal pregnancy by ultrasound.^{3,8} But in our case diagnosis was missed by ultrasounds and it was diagnosed intra-operatively. Other cases have also been reported in the literature in which diagnosis of abdominal pregnancy was made intraoperatively.^{8,9} Trans-vaginal ultrasonography is superior in the evaluation of ectopic pregnancy since it allows a better view of the adnexa and uterine cavity. If there is no intrauterine pregnancy on ultrasonography and the ectopic sac is beside the lower part of the uterus a strong suspicion of broad ligament ectopic should be considered. MRI is the better diagnostic tool as it also guides regarding the extent of peritoneal involvement and surgical planning.

Exploratory laparotomy is the gold standard in the management of broad ligament pregnancy. However in haemodynamically stable patients, removal of small broad ligament pregnancies can be considered laparoscopically.¹⁰ Very rarely such pregnancy may reach up to term and delivered by laparotomy along with excision of placenta which may be adherent to surrounding structures like intestines mesentery etc. posing difficulty in achieving haemostasis as it was there in our case also.⁸

CONCLUSION

Abdominal pregnancy can be missed during antenatal care but high index of suspicion in cases of abnormal lie, displaced cervix and failed induction of labor can help in diagnosis of abdominal pregnancy. Early diagnosis is the only key to reduce high incidence of maternal mortality.

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