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Case Report

Full term broad ligament pregnancy: a case report

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ABSTRACT

A broad ligament pregnancy is extremely rare form of ectopic pregnancy with high maternal and perinatal mortality. The eventuality of such pregnancies reaching full term is even rarer. Although ultrasonography is helpful in making diagnosis, but it is mostly established during laparotomy. Our patient is an unbooked case, G2P1 reported to us at 39 weeks of pregnancy with abdominal pain. Ultrasonography showed viable foetus with severe intrauterine growth restriction (estimated fetal weight of 1.98 kg), transverse lie, severe oligohydramnios with complete placenta praevia. Patient was taken for caesarean section. Intraoperative diagnosis of left broad ligament pregnancy was made, foetus was removed alive and broad ligament along with placenta, left fallopian tube and ovary was excised. Post-operative period was uneventful.

Keywords: Broad ligament pregnancy, Ectopic pregnancy, Laparotomy, Ultrasonography

INTRODUCTION

Ectopic pregnancy in broad ligament is a retroperitoneal abdominal pregnancy which may result from primary or secondary implantation. Its incidence varies from 0.25 to 1.5 percent of all ectopic pregnancies.¹ Abdominal pregnancy is primary when studdiford's criteria is met i.e., normal bilateral fallopian tubes and ovaries: absence of utero-peritoneal fistula and that the pregnancy relates exclusive to the peritoneal surface and early enough to eliminate the possibility of secondary implantation following an initial nidation in the tube.

Secondary abdominal pregnancy grows into the peritoneal cavity after its expulsion from its primary site of implantation. This type of pregnancy results from rupture of tubal pregnancy or from previous caesarean scar. Advanced abdominal ectopic pregnancy is very rare with the incidence being 1 in 30,000. In literature, only a few cases have been reported where such pregnancies

reached term and in some cases even with the live birth of baby.²⁻³ Authors are reporting a case of advanced broad ligament pregnancy where clinical as well as ultrasonography did not help us to diagnose and we could detect it intra-operatively.

CASE REPORT

A 28 year old, Gravida 2 Para 1 with 1 live issue with previous vaginal delivery 2 years back came to our hospital on 12/4/19 at 39 weeks of gestation, spontaneous conception with severe abdominal pain. There was no past history of any minor-major surgery. She had abdominal discomfort throughout her pregnancy for which she was taking ordinary analgesics from over the counter. She had one outside ultrasound report at 20weeks showing normal intrauterine pregnancy. Her Expected date of delivery as per ultrasound was 19/4/19. On general physical examination she was pale, but hemodynamically stable and the fundal height was

corresponding to “32-34 weeks of gestation” baby was in transverse lie and clinically liquor found to be grossly reduced. FHS was 110-116 bpm. She was not in labour. Per vaginal examination, cervix was found uneffaced, closed and high up, presenting part not felt. Ultrasonography revealed a single live pregnancy of 34 weeks gestation in transverse lie, severe intrauterine growth restriction and severe oligohydramnios with complete placenta praevia. Her haemoglobin was 9.6 g/dl and other hematological and biochemical parameters including coagulation profile were within normal range. She was taken up for caesarean section.

Intraoperatively, the uterus was of 8-10 weeks size lying on the anterior and left inferolateral aspect of the mass. As shown in Figure 1, foetus was found encased in the left broad ligament pushing the fallopian tube and the ovary upward and round ligament stretching over it.

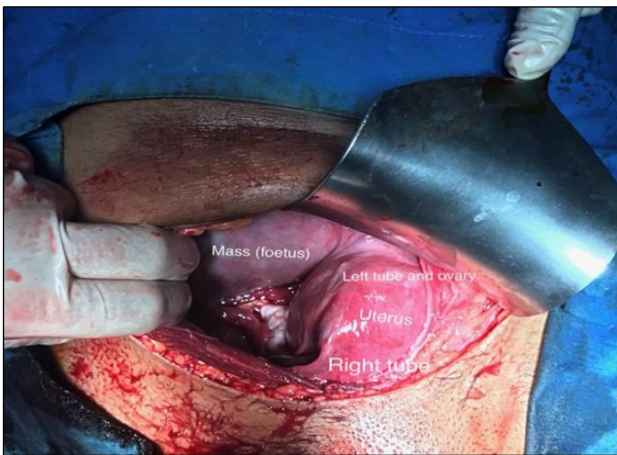


Figure 1: Bulky uterus, left ovary and fallopian tube below mass (foetus) in broad ligament and right side fallopian tube partially seen.

However fallopian tube and ovary on left side were found to be normal. Right side fallopian tube and ovary was also clearly visible. An incision was given on the anterior leaf of broad ligament and a live female baby was extracted by breech with a birth weight of 1.98 kg and admitted in NICU. The foetus appeared to be at term from the presence of features like creases all over soles, fully grown nails, black shiny hairs. Post extraction, abdominal cavity was re-examined; placenta was adhered to posterior leaf of broad ligament and there was no communication with the uterine cavity as shown in Figure 2.

There were absolutely no adhesions anywhere in the abdominal cavity. The sac was excised along with left fallopian tube and ovary and margins were repaired after checking the left ureter patency. One unit of whole blood was given intraoperatively, and patient withstood the procedure well. Mother was discharged on the 10th post-operative day in good general condition.



Figure 2: Left broad ligament containing placenta.

DISCUSSION

An ectopic pregnancy in broad ligament also called as interligamentous pregnancy is a rare form of extra uterine pregnancy where the gestation sac develops within the broad ligament. Fallopian tube is the commonest site accounting for 95.5% of cases.⁴ The non-tubal sites includes ovary and abdomen. Among the abdominal sites pouch of Douglas is common while broad ligament is rare.⁵

Broad ligament pregnancy reaching full term gestation and delivering live baby is an extremely rare phenomenon. However due to poor and neglected antenatal care, advancement in assisted reproductive techniques, endometriosis, tuberculosis, the use of intrauterine devices and induced abortions, it is showing an increasing trend.⁶

To diagnose broad ligament pregnancy antenatally is often very difficult. These women often feel uncomfortable with the pregnancy and have sign and symptoms like abdominal pain, painful fetal movement, gastrointestinal complaints, vaginal bleeding, abnormal lie, spurious labour, failed induction of labour, placental insufficiency leading to fetal demise. In early gestation, conceptus presents as a pelvic mass separate from the uterus. The diagnosis can be aided by ultrasound, or MRI, however it can be challenging to establish diagnosis in advanced gestation, as in our case the ultrasound findings were misleading. The risk of dying from broad ligament pregnancy is 7.7 times higher than from other forms of ectopic pregnancy, mainly due to delay in diagnosis. Bleeding from placental implantation site is the most life threatening complication during laparotomy. Friedrich and Rankin's modification of Studdiford's criteria used to diagnose primary abdominal pregnancy are as follows:

- the presence of pregnancy of no more than 12 weeks, histologic gestation with trophoblastic elements related solely to a peritoneal surface;
- grossly normal bilateral fallopian tube and ovaries;

- no evidence of uteroperitoneal fistula. In our case gestational was term 39 weeks so this criterion cannot be applied.⁷

History of secondary infertility, use of intrauterine devices, progesterone only pills, pelvic inflammatory diseases. Endometriosis, dilatation and curettage, previous uterine scar increases the risk of ectopic gestation. In our case patient had no such history.

Though the clinical manifestation may vary in different cases, abdominal pain the most common finding. Our patient had abdominal pain on and off throughout the pregnancy.

Abdominal pregnancy is always secondary in nature. Sometimes tubal pregnancy may rupture spontaneously or becomes disrupted due to tubal insult or abortion from the fimbrial end and then conceptus gets attached in between leaf of broad ligament, abdominal viscera, outer surface of uterus or the uterovesical fold in the scarred uterus. In our case, uterus and both fallopian tubes and ovaries were found normal with no evidence of rent or hyperaemic changes, hence primary broad ligament pregnancy cannot be excluded.

Once diagnosed, the definitive management is emergency laparotomy. These cases needs to be individualized and the time of surgical intervention may be modified for a favorable fetomaternal outcome, thus reducing maternal morbidity and mortality as well as perinatal mortality.⁸

In recent times, the reported fetal survival has been 63% after 30 weeks of gestation with 20% fetal anomalies or deformities, the most common being facial, cranial asymmetry, joint deformities, and CNS anomalies. With preplanned operative strategy, the maternal mortality has been reduced from 20% to 5% in the past 20 years at a tertiary hospital. Morbidity in surviving women is due to its related complications like peritonitis, septicemia, abscess formation, intestinal obstruction, and abdominal organ injury. Leaving the placenta in situ increases maternal morbidity, but sometimes it has to be left in situ if it is adherent to the intestine or great vessels and is inseparable for fear of excessive haemorrhage.

Recent advances say that with viable foetuses, expectant management is a feasible option at a well-equipped tertiary care hospital. To tackle the uncontrolled haemorrhage intraoperatively, it has been encouraging to use military anti-shock trousers as a good option by some clinicians along with abdominal packing.⁹

CONCLUSION

Ultrasonography is helpful in diagnosis, but findings can be missed as it is an observer dependent procedure and incomplete penetration due to severe oligohydramnios as in our case ultrasound findings were misleading. A better view of uterine cavity and adnexa can be provided by transvaginal ultrasound for early conceptus. An accurate method for evaluating ectopic gestation is non-contrast MRI using T2 weighted imaging. Treatment involves exploratory laparotomy with excision of gestational sac especially in advanced cases. However, in the early stable cases laparoscopic removal is successful.

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