CASE REPORT

Full-term broad ligament pregnancy

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suhasini2386@gmail.com**SUMMARY**

A broad ligament pregnancy is an extremely rare condition. The eventuality of such pregnancies reaching full term is even rarer. A full-term broad ligament pregnancy occurring through a rent in a previous lower segment caesarean scar has only been mentioned in literature but not reported. Our patient is an unbooked case, reported to us at 39 weeks of pregnancy. On clinical examination, an ultrasound and an MRI, a diagnosis of abdominal pregnancy was made. Ultimately the final diagnosis was made only on laparotomy. A broad ligament pregnancy was found with a rent in the previous caesarean scar communicating the fetal sac.

BACKGROUND

Broad ligament pregnancy, also termed as interligamentous pregnancy, is a rare form of ectopic pregnancy. In literature, only a few cases has been reported where such pregnancies reached term and in some cases even with the live birth of a baby.^{1–4} We report a case of postcaesarean term pregnancy with steroid-dependent bronchial asthma diagnosed at laparotomy to be a case of broad ligament pregnancy which appeared to have occurred through a breach in previous caesarean scar. We share the challenges faced by us to manage this rare type of case with a serious comorbidity. On a literature search we could not find any case report of broad ligament pregnancy occurring through the previous caesarean scar.

CASE PRESENTATION

An unbooked 30-year-old woman, gravida 2, para 1 with no live issues with a previous caesarean section 4 years prior for severe oligohydramnios (with neonatal death due to extreme low birth weight) at term pregnancy was referred to our hospital, with a history of inability to perceive fetal movement for the period of 1 week. She also presented to us at 34 weeks with an ultrasonography report of some peripheral clinic showing a viable fetus with severe intrauterine growth restriction and severe oligohydramnios with an estimated fetal weight of 1.65 kg. At that time she was advised admission but she refused to get evaluated and hospitalised for personal reasons. During her present visit her pregnancy was at 39 weeks from her last menstrual period. She was a known case of bronchial asthma and on steroids off and on for last 18 years. She was having markable steroid-induced myopathy and cushingoid features like moon face, truncal obesity, proximal myopathy and abdominal striae. She had no symptoms of pain or discomfort in the abdomen. On admission her vital parameters were within normal limits. Crepitations and

rhonchi were heard in both the lung fields. The uterus was of 28 weeks size, soft, non-tender and clinically liquor found to be grossly reduced. The fetal heart sound was absent. On per vaginal examination, the cervix was found uneffaced, os closed, laterally displaced to left side and high up and a soft mass was felt in the anterior fornix of the vagina.

INVESTIGATIONS

Her haemoglobin was 9.3 g% and other haematological and biochemical parameters including coagulation profile were within normal range. Initial ultrasonography reported intrauterine pregnancy with fetal death. Because of the clinical suspicion of some abnormality, a review ultrasound was requested. A repeat ultrasonography followed by an MRI of the abdomen revealed that the entire amniotic sac with a nonviable fetus and its placenta in the abdominal cavity pushing the empty uterus anteriorly to the left side (figure 1). An MRI picture also revealed a breach in the lower uterine segment of uterus communicating with the fetal sac (figure 2).

TREATMENT

She was taken up for surgery. Her lung condition caused a challenge to the anaesthesiologist which was tackled by their team. On opening the abdomen, omental adhesions were encountered over the gestational sac. Adhesions were separated. The uterus was found to be about 10–12 weeks size lying on the anterior and left inferolateral aspect of the mass. The mass was found enclosed in the right broad ligament pushing the fallopian tubes and the ovaries upward and round ligament stretching over it (figure 3 left). The fallopian tube

Figure 1 MRI picture of pelvis showing uterus on the left side and fetus on the right side. Placenta medial to the fetus.

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Figure 2 MRI picture of pelvis showing a breach in the lower segment of the uterus opening into the fetal sac.

as well as the ovary of right side were found to be normal. Hence the diagnosis of a right broad ligament pregnancy was made. The anterior wall of the sac was cut open. A macerated female fetus of 1.7 kg was extracted. The fetus appeared to be at term from the presence of features like creases all over the soles, black shiny hair and fully grown nails and nipples (figure 4). Placenta was found on the medial aspect of the sac overlying the uterine side, and it was removed without causing undue haemorrhage. The anterior wall of the lower segment of the uterus was found gaping and opening into the fetal sac in the right broad ligament (figure 3 right). The uterus was lying on the left anterior and the cervix was on left posterior aspect of

the sac. The sac had extended into the uterovesical space anteriorly. Lower uterine segment was grossly distorted, papery thin, friable and indistinguishable from the amniotic membrane. The uterus was found not salvageable, hysterectomy was performed (figure 4 inset). A drain was placed in the cavity occupied by the fetus.

OUTCOME AND FOLLOW-UP

Postoperatively the patient was managed with an intravenous steroid, besides other routine medication. Her postoperative period and recovery was uneventful and the stitches were removed on the 10th postoperative day in view of her prolonged medication with steroids.

DISCUSSION

Interligamentous pregnancy is a rare form of ectopic abdominal pregnancy. Incidence is reported as 1 in 300 ectopic pregnancies.¹ 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. It can also occur if a uterine fistula develops between the endometrial cavity and the retroperitoneal space 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.⁵ In our case, conceptus probably penetrated a weak previous caesarean scar and got implanted between the leaves of the broad ligament. Weakness in the previous caesarean scar may have been caused by prolonged exposure to steroid medication by the patient for bronchial asthma. Studies have shown systemic steroids impairs wound healing.^{6 7}

Figure 3 Left: Intraoperative photograph showing amniotic sac pushing the uterus to the left. Round ligament stretched over the amniotic sac. Right: Intraoperative photograph showing the cavity occupied by the amniotic sac and rent in the anterior wall of the lower segment of the uterus.

Figure 4 The full term extracted fetus with placenta. *Inset:* The postoperative specimen of the uterus with a rent in the anterior wall lower segment.

Early diagnosis is essential and critical, because a catastrophic complication can occur due to separation of placenta at any stage. The rate of maternal mortality has been reported to be as high as 20% and the perinatal mortality rate ranges between 40–95%.^{8–9} When the patient does not present with clinical symptoms, a thorough obstetrics assessment including abdominal palpation and per vaginal examination may raise a clinical suspicion. An ultrasound is the most effective method for diagnosing an abdominal pregnancy. An MRI adds to diagnostic accuracy. In our case, we had to resort to an MRI to confirm our diagnosis even after clinical and sonographic evaluation by experienced specialists. Surgical intervention is recommended as soon as an abdominal pregnancy is diagnosed. The final diagnosis is often made during a laparotomy as in our case. Abdominal

pregnancy having live birth has been reported by other authors.^{1–4}

Learning points

- Broad ligament pregnancy occurring through a previous caesarean scar is an extremely rare condition.
- Thorough clinical examination including abdominal palpation is essential to have a suspicion of an abdominal pregnancy.
- Diagnostic dilemmas exist in such cases. An ultrasonography and an MRI may be helpful but a laparotomy remains the ultimate modality to reach to the final diagnosis.

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