CASE REPORT

Intraligamentary Pregnancy: A Case Report

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Abstract

Intraligamentary pregnancy is a type of ectopic pregnancy in which gestation grows between the folds of broad ligament of uterus. It is situated intra abdominally and retroperitoneal. It is an extremely rare form of ectopic pregnancy. This type of pregnancy has been reported to occur in one out of 250 ectopic gestations. Here, we report a case of a primigravidae lady at 15 weeks of gestation, after ultrasound revealed with extrauterine pregnancy with a live fetus lying outside the uterus, which was then confirmed by MRI and revealed intraligamentary pregnancy in explorative laparotomy.

Keywords: Abdominal pregnancy, Magnetic resonance imaging, Placenta, Ultrasonography.

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Introduction

Intraligamentary pregnancy is an extremely rare form of ectopic pregnancy. The etiology of this case is not known and doesn't have any pattern of genetic inheritance. This condition is best diagnosed via ultrasound and to confirm its diagnosis an MRI scan can be done. The outcome for a viable fetus comes with a lot of risk to pregnant women. Intraligamentary pregnancy is boarded anteriorly and posteriorly by the leaves of the broad ligament, medially by uterus and laterally by pelvic side wall and superiorly by fallopian tube. It is an abdominal pregnancy that develops retroperitoneal. The prerequisite of development of intraligamentary pregnancy are: the expanding gestational sac must split the oviduct precisely between the leaves of the broad ligament, the amnion at least must remain intact to permit the fetus to continue to grow in the extraperitoneal sac, and rupture must occur early enough so that the villi are capable of expanding their areas of nidation. The placenta may erode beyond the tubal confines to invade the ovary, uterus, omentum, pelvic peritoneum, and the adjacent viscera. Here we report a case of intraligamentary pregnancy diagnosed by ultrasonography and managed by explorative laparotomy.

Case Description

We present you a case of 30-year-old primigravidae from Kathmandu at 15 weeks of period of gestation presented to the outpatient department of our institute for regular ANC visit. She had amenorrhea for 4 months.

During the obstetric ultrasound scan, 15 weeks of extrauterine single live fetus was seen. The fetus showed cardiac activity with heart rate of 145 bpm. The placenta was seen anterior to the fetus and sub hepatic region. The noted BPD: 34 mm, FL: 18 mm, AC: 93 mm and estimated fetal weight was 131 g (Figs 1 and 2). An MRI of abdomen and pelvis was suggested to confirm the location of fetus and the delineation of placenta. The MRI revealed a mixed signal intensity area measuring 11.7 × 10.3 × 8.4 cm size with thin T2 hypointese wall in abdominal cavity in umbilical region extending at L3 to S1 level, slightly on the right side. Single fetus is seen within it suggestive of abdominal pregnancy and head of the fetus located inferiorly. BPD is approximately 3.3 cm corresponding to approximately 15–16 weeks of gestation. Minimal amniotic fluid is seen around the fetus. Placenta is seen located anteriorly and measures approximately 2.6 cm in thickness. Placenta is abutting peritoneum. Plane of pregnancy with bowel loops, IVC and aorta is maintained. No free fluid is seen in the peritoneal cavity (Fig. 3).

The patient was told about the risk associated with such type of pregnancy. After few days the patient came to the hospital with abdominal pain where she decided to do the surgery.

Following admission, the patient's vitals were being monitored hourly. During the operation general anesthesia was given to the patient. On opening the abdomen with low midline incision 200 ml of haemo-peritoneum along with clots was seen which was evacuated. On further exploration, a right sided large mass was reported measuring about 15 by 15 cm seen comprising of the fetal sac (Fig. 4). The placenta was embedded in old clots which was adhered to the omentum and in between the two folds of right sided broad ligaments (Fig. 5). On lateral side fimbriae of fallopian tube seen. The fetal sac was ruptured releasing the hemorrhagic liquor and baby was expelled out (Fig. 6). On further exploration, the mass consisted of distended and ruptured right tube (medial portion of 4 cm) on the mesenteric border and the right ovary was embedded within the mass. The fetal sac was embedded in between the folds of broad ligaments. About 1.5 liters of blood clots were covering the mass which extended up to bilateral Morrison pouch. Uterus was enlarged up to 10 weeks' size, was soft and an intramural fibroid 3 by 3 cm was noted in the right cornual region. The left tube and ovary were normal. Clamps were applied

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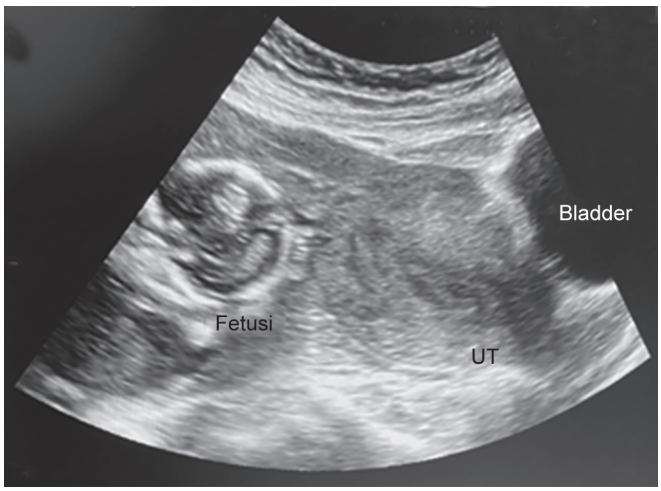

Fig. 1: Ultrasound image showing extrauterine pregnancy

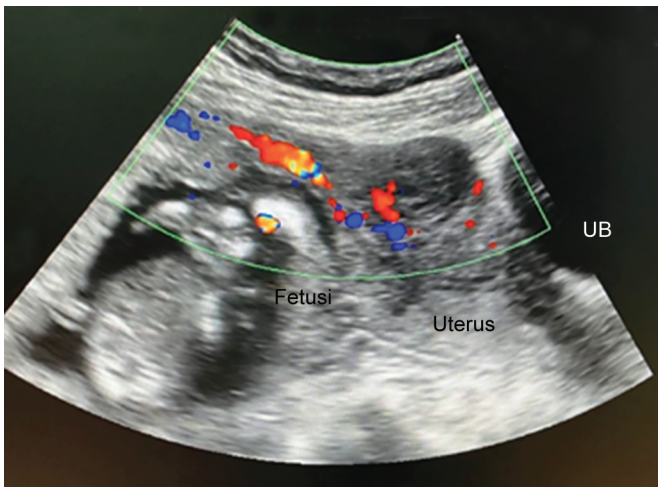

Fig. 2: Ultrasound image showing extrauterine pregnancy with fibroid

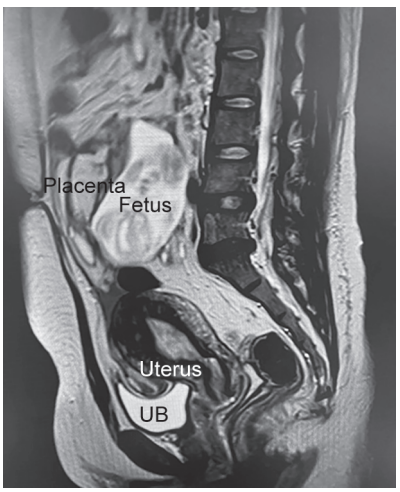

Fig. 3: MRI scan showing extrauterine pregnancy

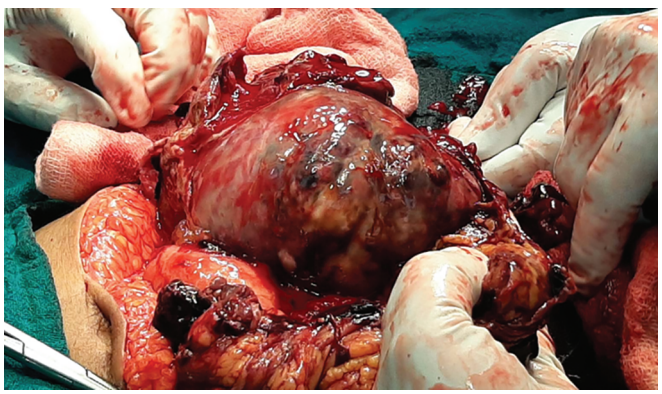

Fig. 4: Sac with placenta

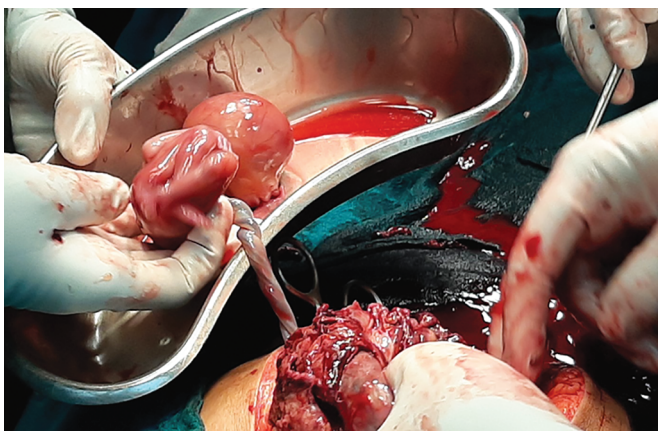

Fig. 5: Baby delivered with ruptured sac

Fig. 6: Fetus with maternal surface of placenta

and right salphingo-oophorectomy was done as right ovary was embedded with the mass and could not be saved. Peritoneal lavage and hemostasis was done and abdominal drain was placed. Abdomen was closed in layers and skin closure was done. Two pint of whole blood was transferred during the intraoperative period with stable vitals at the end of the surgery. The difficulties faced during this surgical procedure was the right ovary being adhering to the mass and hence it could not be saved.

Discussion

We discussed a case of an intraligamentary pregnancy in which there was expulsion of a 15 weeks' live fetus which was presented between the layers of broad ligament. Such case of rare pregnancy has very less chance of survival with great risk for both the mother and the baby. Intraligamentary pregnancy is believed to result from rupture of tubal pregnancy on the mesosalpingeal border.

Clinical diagnosis of intraligamentary pregnancy can be very difficult and need a high index of suspicion. Its diagnosis can be done through radiological tool but exact localization of the fetal sac can be seen only through explorative laparotomy. This type of pregnancy poses a diagnostic problem to the clinician, but ultrasound plays a very important role in diagnosing extrauterine pregnancy. Ultrasound is the safest and easily available method for diagnosis.

This particular case was presented to an out patient department of our hospital for regular antenatal checkup. When the routine ultrasonography was done the fetus was seen lying outside the uterine cavity, normal fetal movement and regular cardiac activity noted. The patient was suggested to do an MRI for delineation of placenta and proper localization of the fetus. MRI also played a vital role to diagnose this condition which revealed features of abdominal pregnancy with single fetus with the head of the fetus located inferiorly and placenta located anteriorly about 2.6 mm thick abutting the peritoneum. MRI finding helps the surgeon for better planning of surgery.

Conclusion

An intraligamentary pregnancy is a rare but life threatening obstetric condition with high maternal morbidity-mortality. Ultrasonography is the safest and cheapest tool for diagnosing extrauterine pregnancy. By using MRI, we can accurately diagnose an abdominal pregnancy. MRI provides more details than ultrasonography and explains the possible mechanism of abdominal pregnancy. We advocate using MRI to help surgical planning and improve outcome in case of abdominal pregnancy.

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