A Report of Rare Case of Advanced Secondary Abdominal Pregnancy with Good Feto-Maternal Outcome Managed by Multidisciplinary Team

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Abstract

Abdominal pregnancy is a rare obstetric complication with high perinatal and maternal mortality due to hemorrhage during placental separation. Timely diagnosis, prompt referral, and a multidisciplinary approach are needed for successful management. We present a case report of advanced secondary abdominal pregnancy resulting from cornual rupture with good fetal and maternal outcome. Our patient presented at 30 weeks and 2 days with complaints of abdominal pain upon fetal movements. Fetal parts were superficially felt on examination, and US revealed abdominal pregnancy. The surgery and neonatal resuscitation were managed by a multidisciplinary team.

Keywords: Abdominal Pregnancy; Ectopic Pregnancy.

Introduction

Abdominal pregnancy is defined as an implantation of the embryo in the peritoneal cavity, exclusive of tubal, ovarian or intra ligamentary pregnancy.[1] It accounts for 1 to 1.5% of all ectopic pregnancies.[2] It can be primary, where the blastocyst implants directly in the peritoneal cavity.[3] Studdiford established three criteria for diagnosing primary peritoneal pregnancies: (a) normal bilateral fallopian tubes and ovaries, (b) the absence of uteroperitoneal fistula, and (c) a pregnancy related exclusively to the peritoneal surface and early enough to eliminate the possibility of secondary implantation following primary nidation in the tube.[4] Secondary abdominal pregnancy is a condition where the embryo or fetus continues to grow in the abdominal cavity after its expulsion from the fallopian tube or other seat of its primary development. It almost always follows early rupture of tubal ectopic pregnancy into the peritoneal cavity.[3] High maternal and perinatal mortality can occur secondary to hemorrhage following placental separation. Advanced abdominal pregnancy may present atypically and can be confused as intrauterine pregnancy, leading to delayed or missed diagnosis. We report a case of advanced abdominal pregnancy that underscores the need for a multidisciplinary approach, early diagnosis, and careful management to optimize the outcomes for both mother and baby.

Case Report

A 27-year-old, gravida two para one live zero with previous caesarean delivery at 30 weeks gestation, was referred to our center with a diagnosis of abdominal pregnancy on US. She had complained of abdominal pain during fetal movements for last 15–20 days. She had an uneventful antenatal period with documented intrauterine pregnancy on US done twice at 13 and 20 weeks [Figure 1], which showed intrauterine pregnancy, and the diagnosis of abdominal pregnancy was missed. On examination, her vitals were within normal limits, pallor was present. Abdomen was distended up to 32 weeks gravid uterus. Multiple knob-like structures along with gross fetal movements were visible. On palpation, fetal parts were easily felt, with the head in the left lumbar region, fetal heart rate of 150 beats per minute. Suprapubic bulge was palpable (i.e. uterus of 14 weeks size). Her hemoglobin was 9.4 g/dl. Obstetric US revealed intra-abdominal fetus corresponding to a gestational age of 27 weeks 1 day with estimated fetal weight of 866 grams in the left lumbar region with breech presentation. The placenta was present in the right iliac fossa in

abdominal cavity with indistinct fat planes with the right lateral wall of the urinary bladder and fundus of uterus with significant vascularity. The patient was explained the warning signs of placental separation, for example, acute pain in the abdomen, palpitation, fainting. Forty-eight hours after admission with steroid prophylaxis, the patient was posted for an elective procedure with a multidisciplinary team of an obstetrician, neonatologist, anesthetist, and transfusion medicine specialist. Abdomen was opened by midline vertical incision. Upon opening the abdomen, baby was present in a pseudo sac formed anterior to the uterus. After opening the pseudo sac, a female baby of 1090 grams was delivered by breech (APGAR scores at 0 and 5 mins was 6 and 9) There was minimal peritoneal fluid around the baby. After delivery, the placenta and membranes were seen attached to the right cornua of uterus. The placenta was communicating with uterine cavity by a small extra lobe of placenta suggesting an abdominal pregnancy secondary to cornual rupture. The right infundibulopelvic ligament was hypertrophied. A small band of adhesion was noted between the placental site and the omentum posteriorly, which was ligated and cut [Figure 2]. The placenta was deriving major blood supply from the uterine and ovarian arteries. Placenta was removed from the attachment at the right cornua, the accessory lobe was removed from the uterine cavity and uterine defect was repaired. Intraoperative blood loss was 500 ml. The postoperative recovery period was uneventful. Primary screening found no anomalies in the baby. The baby was discharged after two months of NICU stay.

Figure 1: US at 20 weeks' gestation.

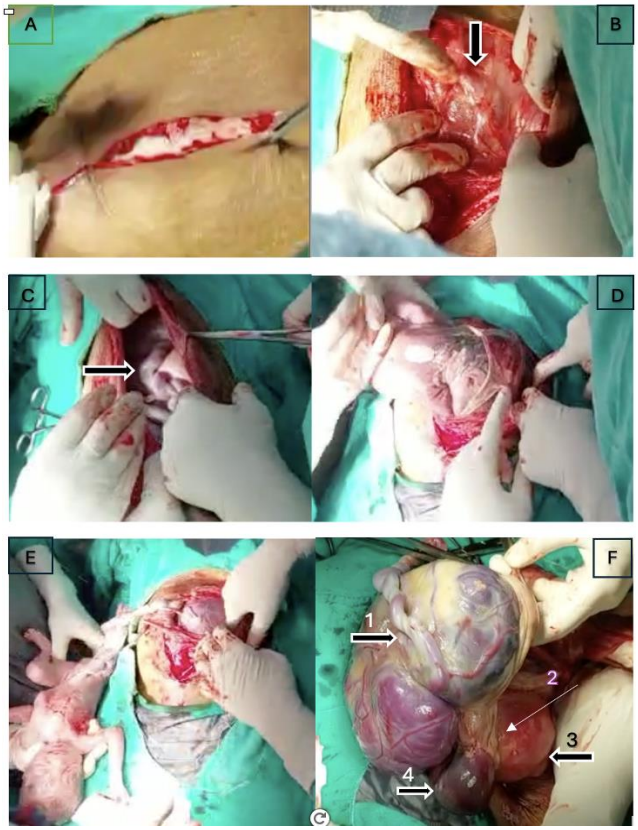

Figure 2: (a) Abdominal incision for laparotomy. (b) Arrow showing pseudosac. (c) Arrow showing baby inside the sac. (d) Delivery of the baby. (e) Baby in surgeons hand. (f) Relation of placenta and uterus.

Arrow 1: Placenta. Arrow 2: Right cornua of uterus. Arrow 3: Uterus. Arrow 4: Accessory lobe of placenta communication with uterine cavity at right cornua.

Discussion

Abdominal pregnancy is rare with an incidence of 1:8000–1:10000 pregnancies.[2] The risk factors of abdominal pregnancy include fallopian tube injury, pelvic inflammatory disease, endometriosis, and pluripara, among others.[5] In spite of considerable improvement in technical abilities, the absolute diagnosis by US is missed in half of the cases.[3] MRI can be used in advanced gestation where ultrasound may not be very useful. Abdominal pregnancies rarely survive to term and require termination at the time of diagnosis as maternal complications are high with increasing gestation. Absence of the amniotic fluid buffer causing compression of the fetus leads to limb defects, facial and cranial asymmetry, joint abnormalities, and central nervous malformation in about 21% of babies.[6] In this case, the baby was protected by a pseudosac all around holding some peritoneal fluid around the fetus which could explain the absence of deformities. Two approaches have been described for delivery of the placenta. Either placenta can be removed after the baby delivery or it can be left in place after ligating umbilical cord if excessive bleeding is expected.[7] In our present case, important factors for a good maternal and neonatal outcome were: a small and easily separable placenta from the cornua and presence of a pseudosac around the fetus. The placental implantation site was carefully assessed without provoking hemorrhage. Besides, an antenatal diagnosis gave time for prompt referral, arrangement of blood products, and multidisciplinary team to prepare for the delivery.

Yu Chen et al.,[7] reported the clinical characteristics and prognosis of 17 cases of abdominal pregnancy retrospectively. Only five of 17 cases were diagnosed before surgery. All patients were treated by surgery and survived. Ten out of 17 patients recovered without complications. Five developed fever and one required reoperation due to intra-abdominal bleeding. One developed bilateral lower limb thrombosis. Gidiri et al.,[8] described three cases of abdominal pregnancy. Two presented in the second trimester, and the fetuses did not survive. One presented in the third trimester and had a good feto-maternal outcome.

Conclusion

Advanced abdominal pregnancy requires a multidisciplinary approach for optimal management. Early diagnosis, meticulous surgical technique, and vigilant postoperative care are paramount for ensuring favorable outcomes for both mother and baby. This case underscores the importance of prompt referral, preparation, and collaboration among specialists in tackling this rare but challenging obstetric condition.

Disclosure

The authors declared no conflicts of interest. A written consent was obtained from the patient for publication of case and images.

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