

Abdominal Ectopic Pregnancy: A Diagnostic Dilemma

Afshan Ambreen, Ayesha Intsar

ABSTRACT

Abdominal pregnancy is a rare event but is associated with significant morbidity and mortality. The incidence of abdominal pregnancy is 1 in 10 000 live births. We report a case on an abdominal pregnancy that presented at 17 weeks of gestation and was not picked up till then on previous ultrasound reports and was eventually diagnosed when presented as missed abortion with placental hemorrhage. The clinical presentation of abdominal pregnancy varies, and the diagnosis depends on a high index of suspicion. Ultrasonography is useful for early diagnosis of the condition. The treatment of the placenta is a matter of controversy. In general, expectant management is suggested. When the placenta is left behind, the use of prophylactic methotrexate is advocated in some cases although expectant management with serial B-hCG monitoring has also shown to result in subsequent placental shrinkage. An awareness of abdominal pregnancy is very important for reducing associated morbidity and mortality.

Keywords: Abdominal pregnancy, Ultrasonography, Pregnancy complications, Morbidity.

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INTRODUCTION

Abdominal pregnancy is a rare event but is associated with significant morbidity and mortality. The incidence varies widely with geographical location, degree of antenatal attendance, level of medical care, and socioeconomic status.¹ It is believed that abdominal pregnancy is more common in developing countries probably because of the high frequency of pelvic inflammatory disease in these areas.² The mortality risk from abdominal pregnancy is 7.7 fold that of tubal pregnancy and 90 fold that of intrauterine pregnancy.^{3,4} The incidence of abdominal pregnancy is 1 in 10 000 live births.⁵ Maternal morbidity may be due to bleeding, infection, toxemia, anemia, disseminated intravascular coagulation, pulmonary embolism, or the formation of a fistula between the amniotic sac and intestine caused by penetration of fetal bone.^{6,7}

The exact pathogenesis of abdominal pregnancy is not known, but most abdominal pregnancies may result from tubal or ovarian pregnancies as abdominal and tubal ectopic pregnancies share similar etiological factors.⁸ For advanced extrauterine pregnancies, there is a 10 to 25% chance of a live-birth.⁹ However, 20 to 40% of livebirths will be malformed and only 50% will survive for longer than 1 week.¹⁰ Furthermore, fetal malformations such as torticollis, facial asymmetry, malformation of limbs, flattening of the head, and malformation of the thorax may occur because of severe oligohydramnios in an extrauterine environment.

The diagnosis of abdominal pregnancy requires a high index of suspicion. Clinical history, physical examination, and laboratory and ultrasonographic features are all nonspecific. Allibone et al⁴ have highlighted some ultrasonographic features of abdominal pregnancy such as no visible uterine wall between the maternal bladder and the fetus, location of the placenta outside the uterus, fetal parts close to the maternal abdominal wall, abnormal lie of the fetus and no amniotic fluid present between the placenta and fetus. Ultrasound examination is the usual diagnostic procedure of choice. In addition magnetic resonance imaging can be useful to show the localization of the placenta preoperatively.¹¹

We report an abdominal pregnancy that was not picked up on ultrasound in early pregnancy and was taken as an intrauterine pregnancy till the time when she presented as a missed abortion at 17 weeks gestation with placental hemorrhage.

CASE REPORT

Thirty-one years old female, married for 5 years, G₅P₀A₄ at 17 weeks of gestation presented in emergency of Fatima Memorial Hospital Lahore with complain of lower abdominal pain for 3 days associated with breathlessness, palpitations and easy fatigability for last 1 day. She had been having regular antenatal visits with a local doctor at Narowal till now and all her reports including baseline investigations were in normal range with two ultrasounds carried out till this time which revealed normal intact intrauterine pregnancy.

Patient was evaluated in detail. On examination she was markedly pale with vitals signs showing tachycardia with pulse of 110b/m and BP 100/60 mm Hg. Per abdominal examination revealed tense, tender abdomen with a fundal height of 18 weeks but fetal parts were not palpable and no fetal heart rate could be auscultated. She had two ultrasound reports done by the doctor with whom she was having antenatal visits since start of her pregnancy at 8 weeks and 14 weeks and both these showed intact alive intrauterine pregnancy. So keeping in view her history and previous ultrasound reports there was suspicion of missed abortion with placental hemorrhage and patient was admitted for further workup and management. All baseline investigations including coagulation profile was urgently sent and ultrasound examination was requested. Labs showed Hb of 6.0g/dl and deranged coagulation profile with PT 40/14 and APTT 52/34 with an INR of 1.3. USG showed anteverted uterus 136 × 44 × 56 mm with endometrial thickness of 8.0 mm. A large heterogenous mass was present posterior to the uterus and on left side measuring approximately 15 × 8.5 × 10 cm containing fetus with biparietal diameter (BPD): 44 mm, head circumference (HC): 145 mm, abdominal circumference (AC): 104 mm, femur length (FL): 24 mm) corresponding to 17 weeks with no FCA. An area of placental hemorrhage was also present measuring 95 × 100 × 81 mm with total volume of 500 ml.

These findings confirmed a diagnosis of abdominal ectopic pregnancy at 17 weeks with absent fetal cardiac activity and placental hemorrhage.

Emergency laprotomy was planned and blood and FFP's were arranged. Under general anesthesia, a midline incision was given. A large gestational sac was present posterior to the uterus containing fetus and placenta. The sac was ruptured and dead baby was taken out which was attached to the placenta by a thin cord. There was moderate amount of placental hemorrhage and approximately 600 cc of blood clots were removed. The placenta was attached tightly to the mesentery of sigmoid colon and was loosely adherent to the left abdominal sidewall. The placenta was dissected away completely and safely from the mesentery of sigmoid colon and the left abdominal sidewall.

The patient remained well after the operation. The preoperative β -human chorionic gonadotropin (hCG) level was 8000 IU/L decreasing to 2435 IU/l on the fifth day after operation. She was transfused a total of 4 units of whole blood and 4 FFP's during the surgery. Her Hb and clotting profile were normal in the postoperative period. Initially she was very upset about the fetal loss as she had history of recurrent miscarriages but was counselled by a clinical psychologist and became normal later on. She was discharged home on day 7. Subsequent out-patient follow-up 4 weeks later showed that the β -hCG level had decreased to 104 IU/l. The patient remained asymptomatic and the β -hCG level returned to normal (<5 mIU/ml) 2 months after the operation.

DISCUSSION

Abdominal pregnancy though a rare event but is associated with significant maternal morbidity and mortality. The incidence varies widely with geographical location, degree of antenatal attendance, level of medical care, and socioeconomic status.¹ Although Allibone et al⁴ have provided guidelines for the use of ultrasonography to diagnose abdominal pregnancy, the reported diagnostic errors in different series have ranged from 50 to 90%¹² as was in this case where the diagnosis was missed by ultrasonologist in first and second trimester. It is usually easier to appreciate the abdominal pregnancy at the end of the first trimester or early in the second trimester, when the pelvic organs are best visualized.³ The maternal mortality rate varies from 2 to 30%, and it can be reduced by early diagnosis and timely intervention.¹³ Perinatal mortality for abdominal pregnancy is high.

For the management of abdominal pregnancy, factors such as maternal complications, fetal congenital abnormality, fetal viability, gestational age at presentation, and the availability of neonatal facilities should be considered. If the fetus is dead, surgical intervention is generally indicated owing to the risk of infection and disseminated intravascular coagulation. Some clinicians, however, recommend a period of observation of 3 to 8 weeks to allow atrophy of placental vessels to occur.¹⁴ If the fetus is alive, laparotomy should be performed, regardless of gestational age or fetal condition.² The reason is mainly based on the unpredictability of placental separation and resultant

massive hemorrhage.³ Some clinicians may adopt an individualized approach. If the pregnancy is less than 24 weeks gestation, immediate operative intervention is indicated because of the high risk of maternal complications and the poor prognosis for the baby if the pregnancy continues. Debate has arisen, however, concerning the appropriateness of a conservative approach in situations where the patient presents after 24 weeks gestation. Cases of the pregnancy being closely observed and surgery being delayed to allow time for the fetus to mature have been reported.¹⁵ This approach requires close surveillance when the benefits to the fetus are weighed against the potential risks to the mother, such as the sudden onset of life-threatening hemorrhage. The patient needs to be admitted to hospital, where surgical expertise, anesthesia, and a 24-hour blood bank service are available.

The management of the placenta in an abdominal pregnancy is still a matter of debate. Partial removal of the placenta may result in massive uncontrolled hemorrhage and shock if the complete blood supply cannot be ligated. Complete removal of the placenta should be done only when the blood supply can be identified and careful ligation performed.¹⁶ In this case, we were able to remove the placenta. However if complete placental removal is not possible it can be left *in situ*. It has been estimated that the placenta can remain functional for approximately 50 days from the operation, and total regression of placental function is usually complete within 4 months.¹⁷ Complications may include ileus, peritonitis, abscess formation, prolonged hospital stay, and fever. The use of prophylactic methotrexate is a matter of debate with some favoring its use for subsequent placental shrinkage while others not who advocate that rapid and major degradation of the abdominal placental tissue can result in the accumulation of necrotic tissue, which is an ideal medium for bacterial growth and sepsis. In conclusion, although abdominal pregnancy is a rare event, awareness of this condition is very important in reducing the associated morbidity and mortality.

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ABOUT THE AUTHORS

Afshan Ambreen (Corresponding Author)

Professor, Department of Obstetrics and Gynecology, Fatima Memorial Hospital, Lahore, Pakistan, e-mail: afshanuppal@yahoo.com

Ayesha Intsar

Senior Registrar, Department of Obstetrics and Gynecology, Fatima Memorial Hospital, Lahore, Pakistan