

Successful outcome in a near term Secondary Abdominal pregnancy presenting as Diagnostic Dilemma

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Abstract: Abdominal pregnancy is historically been defined as an implantation in the peritoneal cavity; exclusive of tubal, ovarian or intra ligamentary implantation. It is a rare form of ectopic pregnancy with an incidence of 1:8099 hospital deliveries and accounts for 1-4% of all ectopic pregnancies. The diagnosis of such a condition is missed during antenatal period despite the use of prenatal ultrasound. Newer advances, like use of MRI complement ultrasound in the diagnosis of abdominal pregnancy. We present an advanced case of secondary abdominal pregnancy which presented as placenta previa with fibroid uterus. The diagnosis was established after MRI scan. A live term baby was extracted after laparotomy and placenta was partially removed after ligating its blood supply. Mother and baby were healthy after such a catastrophic event. A review of the topic and management is also presented.

Keywords: Ectopic pregnancy, secondary abdominal pregnancy

I. Introduction

About 2% of all pregnancies are ectopic. Among these ectopic pregnancies, the one that occur within peritoneal cavity are referred to as abdominal pregnancy. It was first reported in 1708 as an autopsy finding.

Incidence of abdominal pregnancy is 1 in 8099 term deliveries [1]. The maternal death and perinatal deaths were 12% and 72% respectively [1]. Atrash and associates from an analysis of 11 abdominal pregnancy-related deaths and an estimated 5221 abdominal pregnancies studied in the United States, reported 10.9 abdominal pregnancies per 100,000 live births and 9.2 per 1000 ectopic pregnancies. The maternal mortality rate was 5.1 per 1000 cases, which is higher than usual term pregnancies [2]. A viable live fetal outcome is extremely rare.

II. Case Report

A 35 year old lady, resident of Goa, India; presented at 33 weeks of gestation with complaints of an episode of ante partum hemorrhage with a referral ultrasound stating it to be a case of central placenta praevia. The bleeding episode had ceased and patient was comfortable, perceiving good fetal movements and no uterine contractions. Previously she had undergone a lower segment caesarean section nine years ago, for transverse lie. This was followed by an evacuation and curettage for missed abortion three years later.

On examination vitals were found to be stable. Abdominal examination revealed uterine fundal height was slightly less than the gestational age with reduced amniotic fluid volume. Fetus was in oblique lie with regular fetal heart rate. On local examination altered blood was noted. Per vaginum examination was avoided in view of diagnosis being placenta previa.

Patient was admitted in hospital for observation and evaluation. Her hemoglobin was found to be 11 Gm% and a hematocrit of 34%. As per record, ultrasound done at 8 and 13 weeks of gestation showed presence of live intra uterine pregnancy, in addition a cervical fibroid of 6x5x3 cm and low lying placenta was noted.

Institutional ultrasound at admission also confirmed the diagnosis of central placenta previa. In addition it was noted that the amniotic fluid volume was reduced, and no major anomalies were seen in the fetus.

However the findings of a fibroid noticed in earlier sonography were not seen at present examination. However the sonologist had suspicion of abnormal placentation; hence Magnetic Resonance Imaging (MRI) was performed. MRI showed presence of a large gestational sac in the abdominal cavity with no myometrium surrounding it and uterus lying in the pelvis. (Fig 1)

During hospital stay fetal well being was monitored by daily fetal movement count and Doppler velocimetry. As fetal well being was established pregnancy was continued. At 35 weeks of gestation in view of decreased fetal movement and reduced liquor, decision for termination of pregnancy was taken. During the course of hospital stay fetus was constantly in a state of malpresentation.

With adequate blood arranged, laparotomy was done. At laparotomy, it was noted that Uterus was in the pelvis, enlarged up to 14 weeks. From the left lateral wall of uterus below the fallopian tube a gestational sac was coming out of the uterus into the abdominal cavity. This extended up to the epigastrium containing the fetus

and placenta within. Amniotic sac was opened and a healthy baby of 1.6 kg was delivered by breech extraction with an Apgar of 6 and 8 at one and 5 minute respectively. The baby was admitted to the neonatal unit in view of prematurity and growth restriction.

Following delivery of baby it was seen that placenta in addition to its uterine attachment was also receiving blood supply from the omentum and large intestine and was morbidly adherent to uterine wall.(Fig 2) There was profuse bleeding from partially separated placenta. Due to worsening hemodynamic condition of patient and morbidly adherent placenta to uterus, decision was taken to proceed with hysterectomy. Large portion of placenta and membrane were removed after ligating feeding vessels from omentum and intestine.

Rest of the placenta and membrane were left behind. Hemostasis was ensured. Intra peritoneal drain was kept and surgery completed.

Postoperatively patient did well. She received four units of blood. Patient was mobilized and drain and catheter were omitted on second postoperative day. She received adequate analgesia and antibiotic cover. β HCG was 28 units on 10th post operative day. She was discharged on 12th postoperative day. Both mother and baby were doing well.

III. Discussion

Abdominal pregnancies are classified into primary or secondary. In cases of primary abdominal pregnancy the fertilization of the ovum by the spermatozoa occurs within the peritoneal cavity. While a secondary abdominal pregnancy occurs usually after re-implantation of tubal abortion, rupture of a tubal ectopic, or rupture of rudimentary horn of uterus [3][4]. In our case it was evident of it being a secondary abdominal pregnancy as there was continuation of placenta from within the uterus into the extra uterine gestational sac. This could have occurred following the perforation of a weakened uterine wall due to the previous surgeries performed on the uterus.

The incidence appears to be increasing as a result of increasing use of assisted reproductive technology with embryo transfer in developed countries and in developing countries the increase is due to restriction of human resources and diagnostic facilities [5].

Presentation of an abdominal pregnancy may vary and a high degree of suspicion is required for the diagnosis of abdominal pregnancy. History and physical examination are often inconclusive [4]. Abdominal pregnancy may present with any of following clinical features [1]

- History of bleeding or excessive abdominal pain during the first trimester with preceding history of abortion, pelvic surgery or infertility
- Bleeding or non-labor abdominal pain during the third trimester
- Abnormal fetal lie, painful fetal movements
- Maternal declaration of cessation of fetal movements
- Perception on the part of the mother or the physician that ‘something is not right’
- Displaced cervix or abdominal mass palpated apart from the fetus
- Oligohydramnios
- Unusual echographic appearance of the placenta
- Failed induction

Unusual presentation may be in the form of intestinal obstruction [6].

In our case the patient presented with complaints of vaginal bleeding, and examination revealed malpresentation of the fetus and reduced liquor. Retrospectively patient gave history of severe abdominal pain with vomiting during the first trimester.

Diagnosis of abdominal pregnancy is a challenging task. Allibone et al [7] have highlighted ultrasonography features of abdominal pregnancy. In our case, in earlier sonography studies a live intrauterine pregnancy was noted along with a cervical fibroid. Retrospectively it was found to be an extra uterine gestational sac with the separate uterus, the uterus mimicking a cervical fibroid. Abdominal pregnancy was suspected when abnormal placentation and oligohydramnios was seen on sonography done in our institution.

The MRI confirmed this by showing presence of an intrabdominal gestational sac. No myometrium was seen around the gestational sac and the uterus was seen separately in the pelvic cavity. Benefits of MRI are the ability to obtain multiple multiplanar images without exposing to ionizing radiation. It helps to differentiate between different tissue and structures based on their signal characteristics. It does not allow bowel shadows to obscure images. This helps to establish an accurate diagnosis [8]. About 50% of cases are missed on ultrasound but MRI and CT are both excellent diagnostic tools to diagnose secondary abdominal pregnancy [8]. A lateral X-Ray showing fetal parts overlying the maternal spine is also helpful [9]. The role of high maternal serum α feto protein levels and oxytocin stimulation tests are not applicable clinically [10].

Once the diagnosis is made optimal management requires careful planning. When diagnosed in 1st trimester or early 2nd trimester, the management is surgical intervention without delay. When diagnosed late with viable pregnancy as in our case, a conservative approach is proposed in the absence of fetal malformations and good maternal condition in a tertiary care hospital [6]. A good maternal and fetal outcome is not uncommon if pregnancy is continued with daily assessment of maternal and fetal well being [11]. Maternal deaths associated with abdominal pregnancy result from hemorrhage after inadvertent dislodgement of the placenta.

Removal of the entire placenta has been recommended but if significant hemorrhage occurs, it is safer to leave all or part of the placenta and allow it to reabsorb slowly. The risks associated with leaving the placenta in situ include bowel obstruction, fistula formation and sepsis as the placenta tissue degenerates [12]. Prophylactic methotrexate is not advocated when the placenta is left in situ [13].

About 21% of babies born after an extra uterine abdominal pregnancy have birth defects, presumably due to compression of the fetus in the absence of the amniotic fluid buffer. Typical deformities include limb defects, facial and cranial asymmetry, joint abnormalities and central nervous malformation. In our case, the baby was protected by the surrounding amniotic fluid and sac, which could explain the absence of deformities in the baby [9]. Recent cases of minimally invasive laparoscopic and ultrasonically guided procedures have emerged in the literature in the last decade [14].

IV. Figures

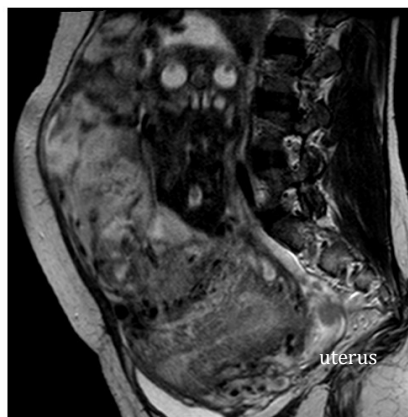


Figure 1: MRI image showing extra uterine gestational sac with placenta anteriorly and the uterus separately in the pelvis

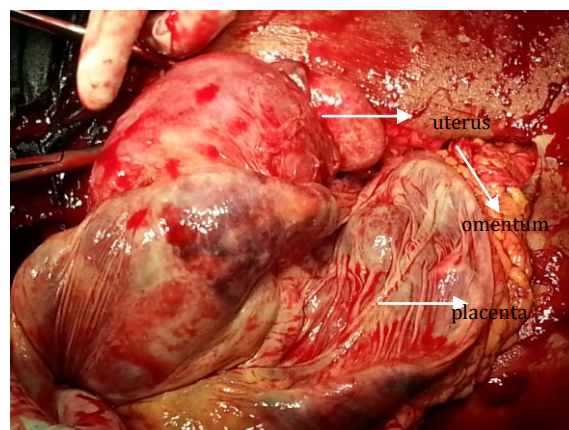


Figure 2: Surgical picture showing attachment of placenta to omentum and uterus

V. Conclusion

This case illustrates a rare obstetric condition which can be very serious leading to maternal mortality and morbidity. Expertly performed and interpreted ultrasonography may be the definitive diagnostic technique.

Once diagnosed optimal management requires careful planning. Prompt treatment is the key to success.

However despite advances in diagnosis and management cases of abdominal pregnancy may be missed. High index of suspicion is needed as with optimum assessment, a planned delivery and good neonatal care unit, both maternal and fetal outcome should continue to improve.

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References

- [1] Nkusu Nunyalulendho D, Einterz EM. Advanced abdominal pregnancy: case report and review of 163 cases reported since 1946. *Rural and Remote Health* 8: 1087. (Online) 2008.
- [2] Atrash HK, Friede A, Hgue CJR: Abdominal pregnancy in the United States: frequency and mortality. *Obstet Gynecol* 1987, 69:333-337.
- [3] Desai BR, Patted Shobhana S, Pujar Yeshita V, Ruge J: Advanced secondary abdominal pregnancy following rupture of rudimentary horn. *J Obstet Gynecol India* 2005, 55(2):180.
- [4] Bhandary Amritha, Thirunavukkarasu Sumangali, Ballal Priya, Shedde Deepak and Rai Sharadha: A rare case of term viable secondary abdominal pregnancy following rupture of a rudimentary horn: a case report. *Journal of Medical Case Reports* 2009, 3:38 doi:10.1186/1752-1947-3-38
- [5] Sh. Motazedian .Term asymptomatic abdominal pregnancy with good maternal and perinatal outcome: a case report: *Irn J Med Sci* 2000; 25(1&2):76-80
- [6] Wondwossen Belete. Advanced abdominal pregnancy managed at Ambo hospital: a case report: *Ethiopian journal of reproductive health* May 2007, 1 (1): 44-51
- [7] Allibone G.W., Fagan C.J., Porter S.C. The sonographic features of intrabdominal pregnancies: *J Clin Ultrasound* 1981;9:383-7.
- [8] J.M. Hall, N. Manning, N.R. Moore, W.R. Tingey, P. Chamberlain. Antenatal diagnosis of late abdominal pregnancy using ultrasound and magnetic resonance imaging: a case report of successful outcome. *Ultrasound Obstet & Gynecol* 7, (1996) 289-292.
- [9] Martin JNJr, Sessums JK, Martin RW, et al: Abdominal pregnancy: Current concepts of management. *ObstetGynecol* 1988;71(4):549-57.
- [10] L. Badria · Z. Amarin · A. Jaradat · H. Zahawi A. Gharaibeh · A. Zobi. Full-term viable abdominal pregnancy: a case report and review. *Arch GynecolObstet* (2003) 268:340–342 DOI 10.1007/s00404-002-0363-y
- [11] Amal A Dahab, Rahma Aburass, Wasima Shawkat, Reem Babgi, Ola Essa and Razaz H Mujallid. Full-term extra uterine abdominal pregnancy: a case report *Journal of Medical Case Reports* 2011, 5:531 doi:10.1186/1752-1947-5-531
- [12] L P S Ang, A C J Tan, S H Yeo. Abdominal pregnancy: A case report and literature review. *Singapore Med J* 2000 Vol 41(9): 454-457
- [13] KY Kun, PY Wong, MW Ho, CM Tai, TK Ng. Abdominal pregnancy presenting as a missed abortion at 16 weeks gestation. *HKMJ* 2000;6:425-7
- [14] Fernandez H, Lelaidier C, Doumrec S, et al (1993) Nonsurgical treatment of heterotopic pregnancy: a report of six cases. *Fertil Steril* 60:428–432