

International Journal of Medical Science and Current Research (IJMSCR) Available online at: www.ijmscr.com Volume4, Issue 2, Page No: 649-656 March-April 2021



An Obstetrician's Predicament - Secondary Abdominal Pregnancy: A Case Report

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Type of Publication: Case Report Conflicts of Interest: Nil

ABSTRACT

Abdominal pregnancy is a very rare and life threatening condition. We present a case of secondary abdominal pregnancy, successfully managed at our institution. A 35 years old gravida 3, para 2 with 26 weeks 1day pregnancy presented to our labour room with chief complaints of acute abdominal pain, distension of abdomen and loss of consciousness. The ultrasound scan done 10 days back showed an empty uterus with a live primary abdominal pregnancy of 23 weeks. On examination she was found to be in hypovolemic shock. Urgent laparotomy was done which revealed hemoperitonuem, an intact amniotic sac containing a 500 gram dead fetus, placenta was attached to the omentum and to then on communicating ruptured right horn of the uterus Abdominal pregnancy is a difficult to establish diagnosis, so high index of clinical suspicion is mandatory for correct diagnosis and management.

Keywords: .secondary abdominal pregnancy, haemo peritoneum, exploratory laparotomy, trans vaginal ultrasound

INTRODUCTION

Abdominal pregnancy is one that occurs in the abdominal cavity outside of the female reproductive organs.¹It can be classified as early or late based on the gestational age at which they present. Early abdominal pregnancy is one that presents at or before 20 weeks of gestation while late abdominal pregnancy presents after 20 weeks of gestation.²Depending on its implantation site abdominal pregnancy can also be defined as primary or secondary. If implantation occurs directly in the abdominal cavity and its organs (excluding the tubes and ovaries), it is referred to as primary abdominal pregnancy. If fetus is expelled from the defect in the implantation site into the peritoneal cavity, where it may continue to grow, it is then known as the secondary abdominal pregnancy³. The most common

location of the abdominal pregnancy is POD followed by the mesosalpinx, omentum, spleen, liver and appendix⁴. The incidence of abdominal pregnancy is 1:8000 -10000 pregnancies⁵. There is a life threatening risk of massive hemorrhage from a partially or wholly separated placenta at any stage of abdominal pregnancy. Abdominal pregnancy is associated with high maternal mortality, with the risk for death seven to eight times greater than from tubal ectopic pregnancy and 90 times greater than from intrauterine pregnancy.⁶

We present a case of secondary abdominal pregnancy.

CASE REPORT

A 35 year old woman with 26 weeks 1 day pregnancy gravida 3, para 2, live1 (all normal vaginal deliveries), last delivery 2 years back presented to our emergency labour room with the chief complaints of acute abdominal pain, distention of abdomen and loss of consciousness . On examination patient was semiconscious, she had marked pallor with cold clammy extremities, feeble and rapid pulse rate of 150/min and had blood pressure measuring 70/48 mm Hg. Abdominal examination revealed a distended tender abdomen and a superficially palpable fetus towards the right side of the lower abdomen. Guarding and shifting dullness present. Abdominal paracentesis revealed hemoperitoneum. Patient had got an ultrasound report (done10 days back), which showed a live pregnancy of 23 weeks towards the right side of maternal abdomen with an empty uterus, suggestive of primary abdominal pregnancy. Patient was intubated. Packed cell transfusion and inotropes amd other resuscitative measures were started. Emergency exploratory laparotomy was done in which around 2500 ml of hemoperitoneum was drained out, and an intact amniotic sac containing a 500 grams dead male fetus lying in the peritoneal cavity(under the right lateral anterior abdominal wall) was delivered . Initially the placenta was thought to be completely attached to the omentum (Picture-1,2) but on careful examination of the uterus and adnexa after tracing the right round ligament, placenta was found partially attached to the ruptured right sided non communicating horn of the uterus (Picture-3,4,). Right ovary and right fallopian tube which were attached to the non communicating right horn of the uterus were found to be normal (Picture4). Left horn of the uterus with the single communicating cervix had normally attached fallopian tube and ovary by its side. Placenta was removed along with the excision of right non communicating horn of the uterus and right salpingectomy. Hemostasis was secured. An intra abdominal drain was kept. 7 units PRBC, 8 units FFP and 2 units cryoprecipitate were transfused. Patient had satisfactory post operative recovery and got discharged after 14 days.

DISCUSSION

There may be difference in the clinical presentation of abdominal pregnancy however severe lower abdominal pain is one of the most consistent findings⁷ and the patient in our case presented with the same. In our case the patient had her first conception after 10 years of marriage which may be due to congenital malformation of the uterus. The most common physical findings reported in literature are the following: abdominal tenderness (100%), an abnormal fetal lie (70%; breech, oblique or transverse), easily palpating the baby's parts on clinical examination, and a displaced uterine cervix (40%)^{8,9}. In our case also patient had abdominal tenderness and easily palpable fetus.

Transvaginal ultrasound done during the first trimester or early in the second trimester of pregnancy remains the first line tool for diagnosing abdominal pregnancy due to better pelvic organ visualization ¹⁰. If ultrasound is done for the first time during advanced gestation diagnosis of abdominal pregnancy can be missed.

The classic ultrasonological features of an abdominal pregnancy are: an empty uterine cavity with no sign of ectopic tubal pregnancy, with an abdominal mass representing the fetus without any myometrium surrounding it or with the absence of myometrial tissue between the bladder and the gestational sac and sometimes without any surrounding amniotic fluid; fetal parts being very close to the abdominal wall, an abnormal lie, no amniotic fluid between the placenta and fetus, free intraabdominal fluid or even abnormal doppler velocimetry in the umbilical artery waveform ¹¹⁻¹⁵.

Tsafriret al., has proposed a set of ultrasonography criteria for diagnosing rudimentary horn pregnancies including the presence of a pseudo-pattern of an asymmetrical bicornuate uterus, the absence of continuity of the cervical canal with the cavity of the horn in which the gestational sac is present, and the absence of myometrial tissue surrounding the gestational sac 16 .

In our case patient had got a transabdominal ultrasound done 10 days before reporting to the hospital which showed empty normal uterus and a live abdominal pregnancy of 23 weeks but she had not consulted any doctor or hospital for further management as it was an unsupervised pregnancy.

MRI provides additional information in patients who need a precise diagnosis in cases of ambiguity and can help define the extent of abdominal and pelvic organ invasion by placental tissue¹⁷. The patient`s clinical condition did not allow us to go for further

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imaging as the diagnosis was evident from her clinical status and previous ultrasound report.

There is variation in the muscular thickness of a rudimentary horn compared to the main uterine cavity so there is inability of the pregnant horn to distend with the growing foetus and hence in 70-90% of cases it ruptures before mid pregnancy ³. In our case also there was rupture of right rudimentary horn of the uterus at 26 weeks of gestation. It is extremely rare for a foetus to survive until term; only 10% of such pregnancies reach term ¹⁸. Due to increased vasculature and thicker walls of the uterine horn ruptured rudimentary horn pregnancies present with more severe bleeding compared to tubal ruptures, leading to high maternal mortality rate¹⁹. In our case also there was massive hemoperitoneum and patient was in hemorrhagic hypovolemic shock.

To allow better access to find the placental attachment and to control the bleeding, open laparotomy is usually needed once abdominal pregnancy is diagnosed ^{4,20}. In our case also we did an urgent exploratory laparotomy of the patient,2500 ml of hemoperitoneum was drained out, and an intact amniotic sac containing a 500 grams dead male fetus lying in the peritoneal cavity was delivered out. Placenta was removed completely along with excision of the ruptured right non communicating horn of the uterus and right salpingectomy. In first instance the diagnosis in our case was perceived as primary abdominal pregnancy but on careful exploration of pelvic anatomy it was found to be a secondary abdominal pregnancy, hence implicating the need for proper anatomical evaluation at laparotomy despite the imaging findings.

As in our condition, the vast majority of cases unfortunately present in the emergency with the acute symptoms due to premature separation of the placenta, so most frequently, the final diagnosis is obtained upon laparotomy^{21, 22,}. The incidence of the diagnostic error is very high, of about 60%, signaling the need for an increased awareness and multiple diagnostic procedures in order to lower such a high risk score ²³.

Maternal morbidity and mortality is associated with severe hemorrhage, bowel obstruction, fistulae or disseminated intravascular coagulation, higher rates being registered whenever the placenta is left in situ as a treatment option^{21,23}. In our case the primary

maternal morbidity factor was hemorrhage, placenta was completely removed along with ruptured right rudimentary horn of the uterus, which contributed to the final favorable outcome, the patient recovered completely and got discharged from the hospital in 14 days. Careful attention to the clinical signs, symptoms, ultrasound and laparotomy findings with high degree of suspicion is required for early diagnosis and management.

CONCLUSION

Failure to diagnose abdominal pregnancies can have grave consequences. Gynecologists need to have a high index of suspicion, a better understanding and interpretation of clinical, imaging and per-operative findings. Early ultrasound imaging is the diagnostic procedure of choice in the rare case of abdominal pregnancy. However, diagnosis can be missed if attention was not paid or if the ultrasonologist is inexperienced. MRI can be used without hesitation in cases of ambiguity. It can also help to define the extent of abdominal and pelvic organs invasion by placental tissue and is safe in pregnancy without any contraindication¹⁷. Early reversion to surgery in cases of diagnostic uncertainity can be invaluable.

Recommendations

and Experience, vigilance clinico-radiological correlation are of utmost importance in reaching appropriate diagnosis of secondary abdominal pregnancy. In cases of clinical ambiguity and laparotomy questionable findings with comprehensive exploration of abdomino-pelvic structures, irrespective of imaging bias can help in optimizing the treatment and preventing the catastrophic event.

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PICTURE-1 Placenta attatched to ruptured fudus of rudimentary horn of uterus



PICTURE-2 placenta misunderstood as being attatched to omentum

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PICTURE-3 both horns of uterus seen with rupture at fundus of right horn with attatched placenta (anterior view)



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PICTURE-4 posterior view of both uterine horns with normal fallopian tube and ovary attatched to right horn of uterus

