

Abdominal Localisation of an Ectopic Pregnancy: Case Report

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ABSTRACT

Abdominal pregnancy is a very rare obstetric complication which is extremely dangerous to the mother as well as the fetus. The diagnose can be difficult using ultrasounds beyond the first trimester, even then a high index of suspicion remains necessary [1-2]. In this report, we present a primigravida woman accounted for pelvic pain and late periods into the Emergency room.

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Introduction

Abdominal pregnancy has been defined as an embryonic implantation in the peritoneal cavity, exclusive of tubal, ovarian, or intra ligamentary implantations. [3]. The sites of implantation include the omentum, pelvic side wall, the Douglas pouch, spleen, bowel, liver, large pelvic vessels, diaphragm, and uterine serosa. They can be divided into early presentation; less than 20 weeks gestation, and advanced presentation; greater than 20 weeks gestation. [4-5]. In most cases women present with abdominal pain and amenorrhea such as the case we are describing.

Case report

We report a case of a 30-year-old woman, who is primigravida without pathological antecedents and did not have any particular surgical history. No contraception was used in the past. The patient came to the Hospital Emergency with a pelvic pain and late periods (14th week of amenorrhea.).

During the examination, she was in good general condition. She had a stable hemodynamic status and hypogastric tenderness during deep abdominal palpation. Gynaecological examination showed a long-closed posterior cervix with no macroscopic abnormalities and no bleeding. The beta chorionic gonadotropin (HCG) rate was 16041 IU/l.

Abdomino-pelvic ultrasonography revealed a globular and empty uterine cavity, increased in size, measuring 144 × 88 x 90 mm and normal adnexa with an intra-abdominal oncofetal and viable pregnancy located in the right iliac fossa estimated at 14 weeks of amenorrhea. The fetal presentation was transverse. The placenta was superior in contact with digestive handles.

Fetal magnetic resonance imaging (MRI) confirmed ultrasound data, it demonstrated a fetus with a fetal transverse presentation in an intact hyperintense amniotic cavity in the abdomen outside the uterus with absence of fetal visceral malformation, and presence of an low abundance hemoperitoneum. Large hypointense opacity floating in the

hyperintense amniotic fluid indicated old hemorrhage. MRI permitted a better analysis of placental contact with abdomino-pelvic organs. It was globular, seated on the posterior and superior surface of the abdomen, lateralized on the right, in touch with the slender handles without signs of parietal infiltration detectable; its vascularization came from the right iliac vessels. The maternal urinary bladder, rectum and bowel loops were found to be relatively free of the fetal sac.

Discussion

Abdominal pregnancy is an extremely rare type of ectopic pregnancy with an incidence ranging between 1:10000 and 1:30000 pregnancies, accounting for 1.3% to 1.4% of all ectopic pregnancies. It can be classified as primary or secondary: Primary abdominal pregnancy occurs when the fertilized ovum implants directly into the peritoneal cavity; secondary abdominal pregnancy occurs when the fertilized ovum first implants in the fallopian tube or uterus followed by rupture of the uterine or tube wall, leading to secondary implantation in the peritoneal cavity. Ovarian, tubal, and intra ligamentary pregnancies are excluded from the definition of abdominal pregnancy [7].

Abdominal pregnancy carries a maternal mortality rate between 0.5 and 18%, and a perinatal mortality rate between 40% and 95%.[6]. In clinical scenarios, the most common complication of morbidity and mortality in abdominal pregnancies is hemorrhage because of deep placental implantation within important abdominal vascular structures.

Clinically, the affected woman may have no complaints, or only have some nonspecific signs and symptoms such as abdominal pain and vaginal bleeding, and the abdominal girth increases just as in a normally implanted pregnancy. [8]. Pathological kinetics of serum HCG allows to suggest the diagnosis of an ectopic pregnancy but does not help to confirm the diagnosis of an abdominal pregnancy.

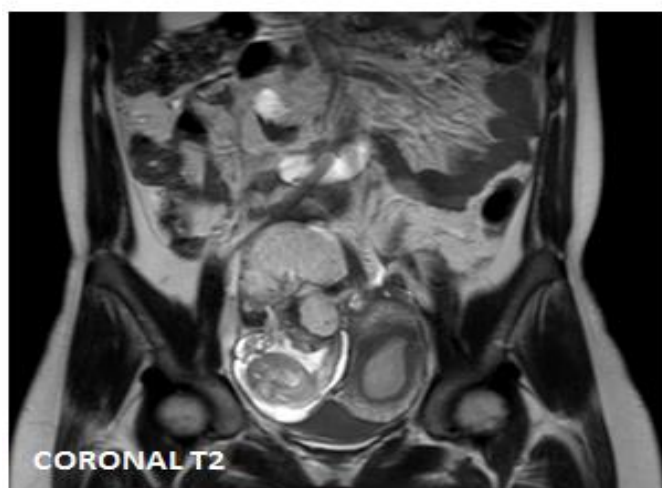
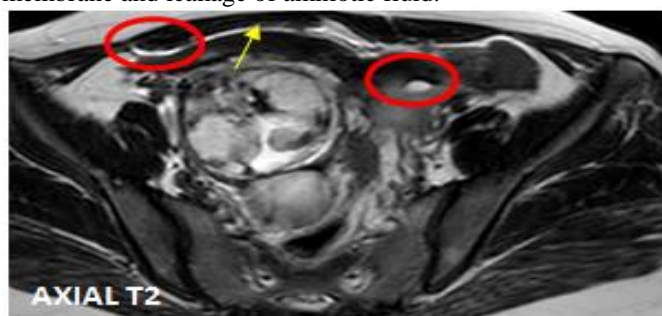
Sonography is the most effective method for diagnosing an abdominal pregnancy; Ultrasonographic criteria were suggested for the diagnosis of an abdominal pregnancy[9].:

- fetus and a gestational sac observed outside the uterine cavity
- or, the visualisation of an abdominal or pelvic mass identifiable as an uterus and separated from the fetus.
- absence of the uterine wall between the bladder and the fetus,
- adherence of the fetus to an abdominal organ and abnormal location of placenta outside the uterine cavity.

MRI is an emerging important, complementary imaging modality that its role is to locate the placenta and identify its adherence to any vital organs, including the liver and spleen. In this case, MRI not only helped confirm the diagnosis, but it delineated the exact anatomical localization of fetal parts and placental tissue as well as the adhesions to the uterus. [10-11]. This information proved vital in preoperative planning. The precise location, state of viability of the placenta and blood supply will irrevocably influence management and aid in planning surgery. MRI has many advantages over ultrasound as bone, gas-filled structures and maternal obesity provides no hindrance to imaging. [12].

The following are the most important elements that a radiologist must focus on when evaluating an MRI for cases of suspected abdominal pregnancy[13].:

1. Fetus: determination of intra-abdominal or extra-uterine fetal presence; lie, position, and relation to the uterus and maternal intra-abdominal organs; viability; congenital abnormalities; signs of fetal demise or maceration or hydrops.
2. Placenta: site and extent of implantation; most possible placental blood supply; bleeding of placental bed; placental infarction.
3. Amniotic sac: oligohydramnios; signs of rupture of membrane and leakage of amniotic fluid.



4. Uterus: integrity of cervix, uterine wall, and endometrial cavity; signs of uterine rupture and possible exit of the embryo/fetus.

5. Nature of the intra-abdominal fluid and amniotic fluid: hemorrhagic or clear.

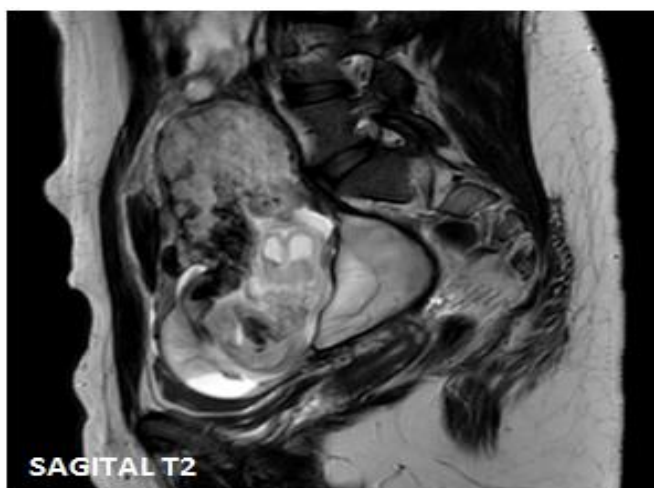
6. Any maternal pathology detected by chance, such as uterine and ovarian neoplasms.

The management of abdominal pregnancy depends on fetal viability, presence of fetal congenital abnormalities, fetal gestational age, maternal complications, placental location and adherence. Usually surgical intervention is necessary regardless of fetal viability. The management of the placenta is still under debate. Total removal is preferable with ligation of blood supply or preoperative embolization. Partial removal due to adherence may result in massive hemorrhage and shock. In cases of adherence, the placenta can be left in situ, ligating the cord as close to the placenta as possible. The placenta usually ceases to function after 4 months. [14].

Postoperative angiographic embolization of feeder vessels is possible and placental involution can be followed by serial bHCG. Some authors advocate preoperative systemic methotrexate in the management of abdominal pregnancy, but it is yet to prove effective. [15].

Conclusion

The Inability to analyze abdominal pregnancies can have grave results. Ultrasound assessment is the demonstrative methodology of decision in the uncommon instances of abdominal pregnancy. Be that as it may, diagnosis can be missed in case consideration was not paid or the ultrasonographer is unpractised. MRI can be used decisively in instances of ambiguity which seems to be the case in an important number of reported case of abdominal ectopic pregnancies.



Comment : MRI in T2-weighted sequence in axial coronal and sagittal sections showing a right lateralized abdominal monofetal pregnancy and a gravid uterus with a thickened endometrium and a free line of vacuity.

Fallopian tubes and ovaries are of normal morphology (red circle and yellow arrow)

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