Efficacy of First Trimester Ultrasound in the Early Diagnosis of Abdominal Pregnancy
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(Received October, 2012)                 (Accepted May, 2013)

Abstract:
Abdominal pregnancy is a rare type of ectopic pregnancy that implants in the peritoneal cavity, other than the fallopian tube & ovary. It is very difficult to diagnose both clinically & radiologically in early gestational period. Cases described in the literature were diagnosed in late gestational period.

The present case was of a young female who presented with intermittent, lower abdominal pain, abnormal foetal movements with a history of abnormal foetal position on clinical examination. On antenatal sonography, a live foetus of 18-19 weeks was seen outside the uterus in peritoneal cavity.

Key Words: Abdominal pregnancy.

Introduction:
An extra-uterine abdominal pregnancy is a very uncommon form of ectopic pregnancy. It is defined as ectopic pregnancy that implants in the peritoneal cavity outside the fallopian tubes & ovary. It is estimated to occur in 10 out of 100,000 pregnancies. (Atrash et al, 1987).

An abdominal pregnancy is usually self limited in early gestational period due to hemorrhage from trophoblastic invasion with complete abortion of the gestational sac.

The diagnosis is frequently missed clinically & radiologically, during antenatal care. However, it is very important to detect an extra-uterine abdominal pregnancy due to associated high maternal mortality rate which is about five per 1000 cases and is approximately seven times higher than the estimated rate of ectopic pregnancy in general.

Careful antenatal ultrasound examination of gravid uterus in case of clinically suspected abdominal pregnancy proves to be immensely useful to make a diagnosis & avoid associated complications.

Here the author reports a rare case of live abdominal pregnancy diagnosed in the first trimester by ultrasound.

Case Report:
A 25 year old lady was admitted with the history of amenorrhoea of 4 months & pain in abdomen since one week. She was admitted in the hospital with the diagnosis of threatened abortion with severe anemia. Patient was treated conservatively. On physical examination her general condition was found to be stable with pulse rate of 90 per minute, Blood pressure 100/70 mm. of Hg; pallor was present. Her systemic examination was within normal limits. On per abdominal examination, uterus was found to be of 18 weeks size and foetal parts were felt superficially.

On per vaginal examination, Os was closed, whole foetus was felt in pouch of Douglas; cervix & uterus were felt separately from the foetus.

Trans-abdominal ultrasound was performed. Sonography revealed a single live foetus of 18 weeks 4 days, seen posterior to uterus. The uterine cavity was empty. The foetus & the placenta were seen separately from the uterus. Placenta was adherent to surrounding bowel loops. Foetus was seen in a flexed position. No free movement of foetus was noted, during examination. Trans-abdominal sonographic findings were confirmed by trans-vaginal sonography which was showing more clear interface between uterus & foetus. The diagnosis of abdominal pregnancy was made (Fig. I & II).

Patient was taken to operation theater; laprotomy was performed with mid line incision. Hemoperitonam was observed. A live foetus of 19 week size was seen in the pouch of douglas.

Placenta was found to be adherent to bowel & infundibulo-pelvic ligament on left side. Foetus was removed, cord cut & placenta left in situ.

The treatment of abdominal pregnancy is laprotomy with removal of foetus; placenta is to be left in situ. Placenta involution was done with...
methotrexate & monitored by ultrasonography & human chorionic gonadotropin (HCG) level (Fig. III).

**Discussion:**

According to implantation site, abdominal pregnancy is classified into two types:

Primary abdominal pregnancy which means implantation of fertilized ovum directly in the abdominal cavity with intact fallopian tubes & ovaries (Dahiya & Sharma, 2007). Secondary abdominal pregnancy occurs following tubal abortion & re-implantation within the abdomen. (Selo Ojeme & GoodFellow, 2002). It is associated with evidence of tubal or ovarian damage.

The incidence of abdominal pregnancy is 1 in 10,000 live births. The maternal mortality rate is 0.5 to 8% & perinatal mortality rate is between 40% to 95% (Martin et al, 1988).

Diagnosis of abdominal pregnancy require high index of clinical suspicion. History & physical examination is often inconclusive. The patient usually presents with abdominal pain, painful foetal movements and sometimes decreased foetal movements. Clinical examination reveals abnormal lie of foetus & palpation of pelvic mass distinct from uterus. Diagnosis by ultrasound is missed in half of the cases (Desai et al, 2005). However, careful sonographic examination in background of high clinical suspicion, makes the right diagnosis. Both trans-abdominal & trans-vaginal sonographic examinations are very useful in the first trimester of pregnancy to differentiate extra from intra abdominal pregnancy.

In the present case the main sonographic findings were abnormal position & decreased foetal movements, and an abnormal position of placenta, visualization of uterus away from the foetus. Foetal skull and other parts were seen overlying the maternal spine on lateral radiograph (Costa et al, 1991).

Magnetic resonance imaging help in localizing the area of implantation of the placenta, its vascular supply & position of the fetus (Harris et al, 1988).

**Conclusion:**

Extra-uterine abdominal pregnancy is a rare form of ectopic pregnancy. Proper clinical history, physical examination with high suspicion and dedicated antenatal ultrasound examination is very useful to make correct diagnosis. It is associated with high maternal mortality rate. Magnetic Resonance Imaging (MRI) is highly specific than other imaging modality, but high cost & lack of wide availability is the disadvantage. It
could be concluded that careful antenatal ultrasound examination prove to be very useful in proper diagnosis in clinically suspected pregnancy cases of abdominal pregnancies.

References:


Source of Support: Nil.
Conflict of Interest: None declared.