

Term Abdominal Pregnancy: An Unending Challenge

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Abstract

Abdominal pregnancy is a rare variety of ectopic pregnancy with high maternal and perinatal mortality. Persistent abdominal pain, mal-presentation, extreme displacement of cervix and lack of myometrial response to oxytocin stimulation are the important clinical diagnostic features of abdominal pregnancy. Diagnosis is missed in about 50% of cases on ultrasound. We are reporting a case of term abdominal pregnancy following tubal ligation, which was clinically suspected to be abdominal pregnancy but was reported as intrauterine pregnancy on ultrasound done thrice, which led to confusion and the diagnosis was confirmed preoperatively only after incising through the uterus. MRI and CT scan should be done along with ultrasonography to confirm the diagnosis of secondary abdominal pregnancy for better surgical planning.

Abdominal pregnancy is a rare variety of ectopic pregnancy with an intra-peritoneal implantation. Incidence is 1 in 10,000 live births and that of advanced abdominal pregnancy is 1 in 25,000 births [1]. It accounts for 1.4% of ectopic pregnancy [2]. In 1942, Studdiford outlined his criteria for abdominal pregnancy: (1) normal bilateral fallopian tubes and ovaries; (2) absence of uteroperitoneal fistula; or (3) presence of a pregnancy related to the peritoneal surface exclusively [3].

It is a potentially life threatening condition with maternal and perinatal mortality ranging from 0.5-8% and 40-95% respectively [4]. Advanced abdominal pregnancy carries a risk of haemorrhage, disseminated intravascular coagulation, bowel obstruction and fistula. Here, we are reporting a case of term secondary abdominal pregnancy following tubal ligation, which was diagnosed perioperatively, only after incising the uterus.

A gravida two para one, thirty years old patient of low mental status was referred from periphery in view of nine months pregnancy with intrauterine fetal demise. She denied any history of pain abdomen, bleeding per vaginum or trauma during the antenatal period. She had full-term vaginal delivery 11 years back followed by tubal ligation.

General physical examination was normal except for mild anemia and low intelligent quotient. Her abdomen was soft, non-tender with fundal height of 32 weeks gestation with cephalic presentation and markedly reduced liquor. Ultrasound revealed 34 weeks intrauterine fetus with cephalic presentation, absent fetal heart sound and severe oligohydramnios. She was subjected to repeat ultrasound which confirmed the above findings. Haemogram, blood sugar and coagulation profile were normal. Vaginal examination, which was done by resident on duty showed high up cervix behind the pubic symphysis with poor bishop score of 3/13. Induction of labor was started with mifepristone (200mg orally) followed by misoprostol after 48 hours (50 mcg vaginally 3 hourly for 3 doses). As, she did not go into labor, she was examined by senior consultant who found the cervix to be very high, retropubic, patulous and unable

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to reach the internal os. The head was palpable through the posterior fornix. Provisional diagnosis of sacculation of the uterus or the abdominal pregnancy was made. Repeat ultrasound was done for cervical length and location of pregnancy which showed three cm cervix with closed internal os and confirmed the intrauterine pregnancy. Further three doses of 50 mcg misoprostol were given vaginally. Despite this, onset of labor failed to happen and decision for cesarean section was taken with adequate blood keeping the possibility of sacculation of the uterus.

Abdomen was opened by infra-umbilical midline vertical incision. The term size uterus was levo-rotated and thick adhesions were present between abdominal wall, uterus, intestine and omentum on left side. Right sided fimbria was visualized but left adnexa were buried in the adhesions. As expected the lower uterine segment was not well formed, hence decision for classical cesarean was taken. Vertical incision was given in presumed upper segment of pregnant uterus, but surprisingly the uterus was found empty and the fundus was continuous with the thick anterior wall of pseudosac which was giving the impression of enlarged uterus. The macerated fetus was removed as breech and the placenta, which was adherent to posterior surface of the uterus, was removed piecemeal. There was no bleeding from placental bed. The sac was adherent to omentum and transverse colon and was left as such. The Uterus was eight weeks size and formed the anterior boundary of the sac in lower part. The incised uterus was repaired, peritoneal lavage done and abdominal drain put in the pseudo sac. She fared well in the post operative period and was discharged after seven days.

Abdominal pregnancy is a potentially life threatening form of ectopic pregnancy with very high maternal mortality. Risk factors are same as that of ectopic pregnancy. Perinatal mortality is 40-95% due to intrauterine death in most of the cases and associated intrauterine growth restriction, low birth weight, postural deformities and congenital malformations in live baby. It can be primary where fertilized ovum is implanted directly to peritoneal cavity or secondary where fetus grows in abdominal cavity after its expulsion from fallopian tube or other seat of its primary development.

Persistent abdominal pain, painful fetal movements, persistent mal-presentation, extreme displacement of cervix, palpation of fetal parts through fornices, failure of spontaneous onset of labor pains, and lack of myometrial response to oxytocin stimulation are the important diagnostic features of

abdominal pregnancy [1,4]. In the present case patient did not complain of bleeding per vaginum or pain abdomen during the antenatal period, but this history may not be reliable as she was mentally challenged. Clinical examination (retropubic cervix with fetal parts palpable in pouch of Douglas) and non respondent myometrium to misoprostol suggested the possibility of abdominal pregnancy but the ultrasound missed the diagnosis in spite of being performed three times. This may be due to the thick pseudosac and continuity of the fundus of the uterus with the anterior wall of the sac. Ultrasonographic diagnosis is missed in about 50% of cases [5,6]. Akhan criteria [7] to diagnose abdominal pregnancy are 1) Visualization of fetus separate from uterus. 2) Failure to visualize the uterine wall between fetus and urinary bladder. 3) Close approximation of fetal parts to maternal abdominal wall. 4) Eccentric position or abnormal fetal attitude with visualization of extra uterine placental tissue. MRI and CT are excellent imaging techniques to diagnose abdominal pregnancy [1]. In some cases diagnosis is not made until laparotomy as in the present case [3]. In this patient, if the diagnosis was made preoperatively, the uterine incision would have been avoided.

Once diagnosis of abdominal pregnancy is made, surgery is indicated as expectant management carries the risk of sudden life threatening intra-abdominal bleeding and poor fetal prognosis. In early abdominal pregnancy laparoscopy may be successful in selective cases [8]. Rahman et al carried out selective arterial embolization to help prevent haemorrhage in cases of advanced pregnancy [9]. Preoperative methotrexate has been tried by Worley et al to decrease the vascularity [10]. Removal of entire placenta is ideal and should be done if technically feasible, if adherent with vital structures can be left in situ and postoperative methotrexate is recommended [9]. In the

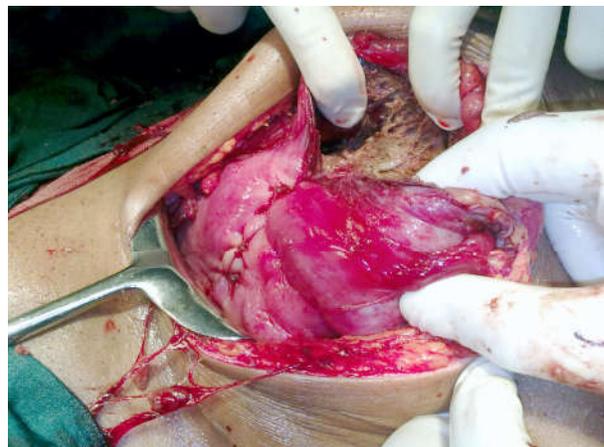


Fig. 1: Showing the stitched uterus and pseudo sac lying in continuity above it

present case, complete placental removal was possible without significant haemorrhage. Thus proper preoperative evaluation with appropriate diagnostic techniques can help with a timely diagnosis and planned treatment for abdominal pregnancy.

The presentation of a pregnant woman with intrauterine fetal demise and non responsive myometrium to oxytocin should alert the obstetrician about the possibility of secondary abdominal pregnancy. One should not rely only on the ultrasound for diagnosis. MRI and CT scan should be done to confirm the diagnosis for better surgical planning.

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