

ADVANCED SECONDARY ABDOMINAL PREGNANCY WITH SATISFACTORY FETO-MATERNAL OUTCOME- A RARE CASE AT A TERTIARY CARE CENTRE.

Obstetrics & Gynaecology

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ABSTRACT

Abdominal pregnancy is a rare obstetric complication with high maternal and perinatal morbidity and mortality. Timely diagnosis and management by multidisciplinary approach is the key for successful outcome. Advanced abdominal pregnancy with healthy fetus surviving near term is extremely rare. I present a case report of advanced secondary abdominal pregnancy at 36 weeks of gestation with good feto-maternal outcome. The delay in diagnosis was due to repeatedly missed diagnosis by ultrasound as a case of central placenta previa. Emergency laparotomy and neonatal resuscitation were done by multidisciplinary team. Post-operative period was uneventful. Both the mother and baby were doing well at the time of discharge from hospital.

KEYWORDS

Abdominal Pregnancy, Advanced Abdominal Pregnancy, Ectopic Pregnancy.

INTRODUCTION:

Abdominal pregnancy is defined as an implantation of the embryo in the peritoneal cavity, exclusive of tubal, ovarian or intraligamentary pregnancy [1]. Abdominal pregnancy was first reported in 1708 as an autopsy finding and a number of cases have been reported world-wide with varying presentations [2]. Abdominal pregnancy represents 1-1.5% of all ectopic pregnancies with an estimated incidence of 1:8000-10,000 pregnancies [1]. Abdominal pregnancy can be classified into primary and secondary. Primary abdominal pregnancy occurs when the fertilized ovum implants directly into the peritoneal cavity [3]. It is the less common type. Secondary abdominal pregnancy occurs when the fertilized ovum first implants in the fallopian tube or uterus & then due to fimbrial abortion or tubal rupture or rupture of uterus, there is secondary peritoneal implantation followed by subsequent development of fetus in the abdominal cavity [4]. Ruptured tubal ectopic pregnancies account for the majority of secondary abdominal pregnancies. Secondary abdominal pregnancy is much more common than primary abdominal pregnancy. Studdiford has established three criteria for diagnosing primary abdominal pregnancies [5]. They are- (a) Normal bilateral fallopian tubes and ovaries. (b) Absence of utero-peritoneal fistula. (c) A pregnancy related exclusively to the peritoneal surface and early enough to eliminate the possibility of secondary implantation following primary nidation in the tube [6].

Viable advanced secondary abdominal pregnancies are very rare and only a few sporadic cases have been reported in the past 10-15 years [6]. Secondary abdominal pregnancy has a high maternal mortality rate between 0.5-18% and a perinatal mortality rate between 40-95% [7,8]. High maternal and perinatal mortality is due to massive haemorrhage following placental separation. Secondary abdominal pregnancies generally do not go to term. Another challenge is- very high (40%) incidence of congenital malformation of fetus [9, 10].

Advanced secondary abdominal pregnancy with a healthy viable fetus is therefore an extremely rare condition. I present a rare case of an abdominal pregnancy which reached near term with delivery of a live low-birth weight newborn without any congenital malformation. Both the mother and baby were discharged in a satisfactory condition.

Case report:

History:

A 28 years old, 2nd gravid mother with one living issue delivered by caesarean section 5 years back, admitted in our department on emergency basis on 11/02/2024 with the complaint of pain abdomen for last 2 days. Her period of gestation was 35 weeks 6 days. All the previous records were showing that she was followed-up in a local health centre from where she was referred to our OPD two times for chronic pain abdomen. In the OPD of our Institute on 17/10/2023, ultrasound done and revealed- a single live intra-uterine fetus of 17 weeks maturity, placenta- fundo-anterior wall of uterus, liquor-adequate. She was advised rest and antispasmodics for few days. She again visited our OPD on 20/01/2024 referred by the local health centre for chronic persistent pain abdomen.

Ultrasound done and revealed- a single live intra-uterine fetus of 30

weeks 4 days maturity, placenta- central placenta previa, liquor-adequate for gestation. She was advised rest and antispasmodics when necessary and to attend our OPD after 2 weeks for consideration regarding admission. But she did not attend our OPD further. On 11/02/2024, she attended our Emergency and admitted with the complaint of persistent pain abdomen, not relieved by any medication for last 2 days.

General examination:

She looked emaciated and slightly pale. Her vital signs were within normal limit. Cardiovascular and respiratory system did not reveal any abnormalities.

Abdominal examination:

Symphysio-fundal height was term sized, lie-longitudinal and presentation was Breech. The fetal heart rate was 132 bpm. There was no uterine contraction.

Per vaginal examination:

The external os was closed. Cervix was long, tubular and uneffaced. There was no per vaginal dribbling or bleeding.

Investigations:

The mother was put on closed monitoring in our Obstetric HDU. All baseline blood investigations were sent. Arrangement for PRBC, FFP and Platelet started- as she was a suspected case of post-cs pregnancy with central placenta previa. The mother was sent to our Radiology Department for ultrasound by a senior consultant and diagnosed the case as a Secondary Abdominal Pregnancy. Ultrasound report came as- a single live fetus of 34 weeks of gestation (EFW-1.9 kg) lying in the abdominal cavity of mother. Uterus was empty and the placenta appeared to be attached to the serosal surface of the fundus of uterus. Amniotic fluid was reduced (AFI=3-4) and echogenic and Color Doppler study showed- reduced EDF of the umbilical artery.[Figure-1].

Figure 1: 2D Ultrasound image showing Placenta outside the uterine cavity.



Management:

A multidisciplinary team was constituted by Obstetrician, neonatologist, anaesthesiologist, general surgeon and critical care specialist. A decision for emergency laparotomy was undertaken and

the mother was shifted to OT. Abdomen was opened by midline longitudinal incision extended about 3 cm above the umbilicus [Figure-2]. During opening the abdomen by cutting the peritoneum, there was accidental rupture of amniotic sac- slight meconium stained amniotic fluid came out-sucked by sucker. The fetus along with placenta were in the peritoneal cavity [Figure-3]. There was no haemoperitoneum. The fetus was delivered from the abdominal cavity, umbilical cord clamped, cut and ligated and the newborn was handed over to the neonatologist. The newborn cried immediately after birth, with a Apgar Score of 8/10, weighing 1.8 kg. After initial resuscitation, the neonatologist admitted the baby to NICU for close observation. The uterus was found ruptured at the fundus near right cornue and the placenta was extensively adhered to the edge of the ruptured site—indicating that placenta was getting blood supply both from uterine and ovarian vessels [Figure-4]. Both the fallopian tubes, ovaries and other intra-abdominal organs were normal. The amniotic sac was attached to the bowels and anterior abdominal wall—gentle adhesiolysis done. We did not tried to separate the placenta from its attachment with the cornue of uterus due to anticipating blood loss. Total hysterectomy done to secure haemostasis [Figure-5]. Intra-operative blood loss was approx. 500 ml. Abdomen was closed in layers. She was transfused 2 units of PRBC post-operatively. Her post-operative period was uneventful. Primary screening found no congenital anomalies in the newborn. Both the mother and the baby were discharged on 12th post-operative day.

Figure 2: Midline laparotomy.



Figure 3: Fetus and Placenta in the mother's abdominal cavity.



Figure 4: Placenta attached near the right cornue of uterus.

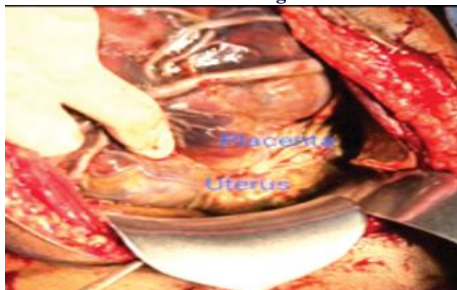


Figure 5: Specimen of Placenta and Uterus.



DISCUSSION:

Advanced Abdominal Pregnancy (AAP) is classically defined as a pregnancy that has progressed beyond 20 weeks of gestation in which the fetus is growing and developing in the mother's abdominal cavity [11]. it is an extremely rare obstetric complication that draws attention in the following aspects –

- In spite of considerable improvement in technical abilities, the absolute diagnosis is missed in half of the cases [3]. A high index of suspicion is needed to make a first time diagnosis of abdominal pregnancy [12]. Ultrasonography is an important tool in assessing a suspected advanced abdominal pregnancy. The most frequent and reliable finding includes an empty uterus separated from fetus [13,14]. MRI plays an important role in diagnosis. In this case, the diagnosis was missed on initial ultrasound. Persistent pain abdomen in non-effaced cervix gave rise to suspicion for alternate diagnosis. Repeat ultrasound diagnosed the case as secondary abdominal pregnancy.
- This case is to be reported as rare one. All the literature review are showing that abdominal pregnancies rarely survive to term and require termination at the time of diagnosis as maternal complications are high with increasing gestation. The overall fetal survival rate remains low [15]. This case is to be reported for future reference as the pregnancy continued till late 3rd trimester and mother delivered a healthy live fetus.
- This case is to be reported as rare one. All the previous reports are showing that- fetal congenital malformations are high (about 40%) in abdominal pregnancies [2]. Absence of amniotic fluid buffer causing compression of the fetus that leads to limb defects, facial and cranial asymmetry, joint abnormalities and cranial nervous system malformation in about 21% of cases [16]. In this case, no congenital malformations were detected.
- After delivery of the fetus, placental implantation should be carefully assessed. Bleeding from the placental site can be a life – threatening complication during laparotomy. Two approaches have been described for delivery of the placenta: Either placenta can be removed if it is easily detachable or can be left in- situ after ligating the umbilical cord [2, 17]. In this case, there was significant bleeding from a detached portion of placenta and the uterus was ruptured at the fundus – that required total hysterectomy.
- The treatment for abdominal pregnancy has traditionally been laparotomy. Recent cases of minimally invasive laparoscopic and ultrasound guided procedures have been emerged in the literature in the last decade for abdominal pregnancies of early gestation [18,19].

CONCLUSION:

Advanced abdominal pregnancy with delivery of a healthy newborn is a very rare scenario. Meticulous ultrasound examination should be done routinely in all cases in the first trimester to exclude abdominal ectopic pregnancies. Diagnosis of this condition is difficult especially in advanced gestation. Early diagnosis, meticulous surgical technique and vigilant post-operative care by multidisciplinary approach are paramount for assuring favourable outcomes for both mother and baby.

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