Greener Journal of Medical Sciences
Vol. 13(1), pp. 37-41, 2023
ISSN: 2276-7797

DOI: https://doi.org/10.5281/zenodo.7698305
https://gjournals.org/GJMS

Abdominal Pregnancy with a Live Baby at 33 Weeks Gestation – A New Case Report.

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ARTICLE INFO

Article No.: *030123020*
Type**:** *Case study*
Full Text: *PDF, HTML, PHP, EPUB*
DOI: *10.5281/zenodo.7698305*

Accepted: *03/03/2023*
Published: *04/03/2023*

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Keywords: *Abdominal pregnancy, live baby.*

ABSTRACT

Abdominal pregnancy is a very rare type of Ectopic pregnancy which is associated with high morbidity and mortality for both the mother and the fetus. It poses a lot of challenges both in the diagnosis and management, hence high index of suspicion is important in making prompt diagnosis in such situation.

We report a case of abdominal pregnancy with a live baby at 33 weeks gestation. A 32 year old Nigerian woman, Gravida 3 par 2 + 0 (2 alive) was referred to our institution from a peripheral hospital on account of abdominal pain of 4 months duration. The patient had exploratory laparotomy for Ectopic pregnancy and had a negative exploratory laparotomy. However, the abdominal pain and distention persisted and she was referred to our centre. After examination and investigations, the diagnosis of abdominal pregnancy at 33 weeks was made. She received Dexamethasome for lungs maturation and subsequently had laparotomy and the outcome was a live male preterm baby with a birth weight of 1.7kg. The placenta was attached to the anterior wall of the uterus and omentum. The baby died after 24 hours due to repeated episodes of apnoea, the patient was discharged after a week.

Abdominal pregnancy is an extremely rare type of ectopic pregnancy. It is a life threatening conditions associated with high morbidity and mortality for both the mother and baby. High index of suspicion is required to making a prompt diagnosis in such situation.

INTRODUCTION:

Abdominal pregnancy is one of the rare and life threatening type of Ectopic pregnancy which is implanted in the peritoneal cavity outside the uterus, fallopian tubes and ovaries.(1)The clinical symptoms of uncomplicated abdominal pregnancy is not specific. (2)

It poses a lot of challenges both in the diagnosis and management, hence high index of suspicion is vital in making prompt diagnosis.(2) In addition to clinical suspicion, imaging especially ultrasound is a very important diagnostic tool, rarely Magnetic Resonant Imaging (MRI) can also be used. (3, 4)

Abdominal pregnancy can be classified into primary or secondary type depending on the primary site of gestational implants.

The primary abdominal pregnancy is the type of ectopic pregnancy in which the blastocyte is primarily implanted inside the peritoneal cavity, while the secondary abdominal pregnancy occurs when the blastocyte is initially implanted either in the tube, uterus or ovary but later migrated out due to tubal or uterus ruptures or tubal abortion, then it will be implanted into the peritoneal cavity. Studdford in 1943 introduced criteria for the diagnosis of primary abdominal pregnancy. (5)

Though the exact aetiology of primary abdominal pregnancy is unknown. (5, 6) however, there are different risk factors. The risk factors identified are tubal damage, pelvic inflammatory disease, multiparty invitro-fertilization and others.

The incidence of abdominal pregnancy differs in various publication and ranges between 1 – 10,000 pregnancies and 1 - 30,000 pregnancies.(1,7) Abdominal pregnancy may account for up to 1.4% of all ectopic pregnancies (1,7). The incidence is high in women in developing nations. (2, 7) This may be due to low socio-economic status, high rate of P.I.D, history of infertility, tubal sterilization, tubal reconstruction surgeries and pregnancy with intra-uterine contraceptive devices. (8)

When comparing tubal and intrauterine pregnancies, the risk of dying from abdominal pregnancy is high. It is 7.7 times higher than the tubal pregnancy and 90 times greater than intra-uterine pregnancy. (7,8) The maternal mortality may range from 0.5% to 18% and the perinatal mortality is 40-95%. (9)

Congenital malformation are every common amongst baby resulting from abdominal pregnancy. There are reports of fetal malformation as high as 40% associated with abdominal pregnancies and only 5% of these babies survive up to one week post delivery (10,14).Also intra-uterine growth restriction is common among babies in advanced abdominal pregnancies. (2,13)

A review of literature from 2008-2013, showed that 38 cases of advanced abdominal pregnancies result in a live birth were identified from 16 countries (4,10).This abdominal pregnancy with resultant healthy new born is very rare (9,10). Therefore, we present a rare case of abdominal pregnancy with a live baby at 33 weeks gestation.

CASE REPORT

A 30 year old unbooked Gravida 3 Part 2+0 unsure of her date and she has had 2 successful vaginal deliveries. Her last delivery was in 2014, however she had been amenorrhoic for 8 months. She visited a peripheral hospital for a 2 month period to presentation on account of dull aching abdominal pain of 4 months duration. She stated to have had exploratory laparotomy at the peripheral hospital on account of Ectopic pregnancy 2 months prior to presentation and she stated that Ectopic pregnancy was not located and she was discharged, however the abdominal pain and distention persisted and also became worst. She stated that the abdominal pain was dull aching pain all over the abdomen with associated abdominal distention and shortness of breath. She also experienced increased nausea and vomiting, compared to the previous 2 pregnancies. She also stated that the abdominal pain worsened on feeling movement in the abdomen, she reported to have had no vaginal bleeding. She never had antenatal care or an ultrasound examination for the index pregnancy. When the symptoms persisted and was worsening, she went back to the peripheral hospital that now referred her to our institution for the first time since the conception of current pregnancy.

On physical examination, she was not pale, anicteric, afebrile, not dehydrated and there was no pedal edema. Her vital signs were pulse rate 86beats/min, Blood pressure = 110/70mmHg, Respiratory rate = 20 cycles/min, Temperature = 36.5^0C. Her respiratory and cardiovascular examinations were unremarkable.

Abdominal examination showed, mild abdominal tendencies and the pregnancy was 34 weeks with easily palpable fetal parts, transverse lie, fetal heart rate was 150beat/min. there was no clear border of the uterus. The pelvic examination, showed cervix that was posterior, not effaced and closed.

After admission, the Laboratory results showed her haematocrit level of 31% Blood group is O+ve, urine analysis was normal. Ultrasound findings indicated intra-abdominal viable pregnancy at 33 weeks in a traverse lie, the uterus was empty. Based on the above findings, she was diagnosed to have a preterm viable extra-abdominal Pregnancy. She was given Dexamethasone for lungs maturation and was booked for Elective laparotomy. Three Units of blood was provided. She was counselled on her condition and possible option of intra-operative management and complications.

Written consent for the surgery was obtained from her, the general surgeon and the new neonatologist were invited to be present in the theatre.

Under spinal anesthesia, she had laparotomy. The baby was found floating in the peritoneal cavity, part of the baby covered consented by gut. No amniotic sac noted. The placenta was attached on the anterior wall of the uterus involving the right fallopian tube and ovary; and omentum. There was tubo-ovarian mass on the right. The left ovary was essentially normal and the left tube was adherent on the ovary. The uterine is normal size.
A live male preterm baby Apgar score 8 in the first minute and 9 at the fifth minute, Birth weight was

1.7kg.Part of the fetal membrane was seen on the baby's head. Estimated blood loss was 600mls.

OPERATIVE PROCEDURE

The abdomen was opened through a middle subumbilical incision, the peritoneal was opened carefully to avoid rupture of the amniotic sac. The baby was found lying freely in the peritoneal cavity. The umbilical cord was double clamped and cut in between baby was delivered and handed over to the neonatologist.

The Apgar score at birth was 8 in one minute, 9 in five minute, Birth weight was 1.7kg.
The placenta was attached to the Omentum and the anterior all of the uterus getting blood supply from birth.

Clamping, cutting and transfixing of the omentum attached to the placenta was carried out. The placenta was separated from the anterior wall of the uterus and delivered embloc. Haemotasis was secured. The abdomen was cleared and closed in layers. The estimated blood lost was 600mls.

The patient was taken to the PACU for monitoring and thereafter taking to the lying inward for other post-operative care.

The baby was admitted at the SCBU, and was reported to have had repeated episode of apnoea and he died after 24hrs in the SCBU. The patient was discharged after one week and she is currently doing well.

DISCUSSION

Ectopic pregnancy is a type of pregnancy and defined as the implantation of the blastocytes outside the endometrial Lining. Based on the location of the blastocytes, Ectopic pregnancy can be tubal ectopic. When the implantation is inside the tube, ovarian when implanted on the ovary, the implantation of the balstocytes inside the abdomen is called abdominal pregnancy. Implantation of the blastocytes can also occur inside the cervix (Cervical pregnancy) and also inside the caesarian section scar (1, 2).

The prevalence of ectopic pregnancy is 1-2%, amongst all the different types of ectopic pregnancies 95-98% occur inside the uterine tubes (3, 8).An abdominal pregnancy is extremely rare but life threatening type of pregnancy which is implanted outside the uterus cavity and fallopian tubes. (5,10) It accounts for 1 per 10,000 birth and accounts for 1.4% of ectopic pregnancy, (5,11)

Abdominal pregnancy is usually misdiagnosed as an intra-uterine pregnancy during antenatal care. In the first trimester, it is missed as tubal pregnancy and late trimester, it is missed as intra-uterine pregnancy.

Abdominal pregnancy can be classified into primary and secondary type depending on the primary site of the gestational implantation.

The primary type of abdominal pregnancy is the type of ectopic pregnancy in which the blastocytes. Primarily implanted inside the peritoneal cavity while the secondary type of abdominal pregnancy is initially implanted either in the tube, uterus or ovary but later migrated out due to tubal or uterine rupture or tubal abortion, then it will be implanted into the peritoneal cavity.

Studdiford in 1942, introduced the following three diagnostic criteria for primary abdominal pregnancy. (2,5, 8, 10) There are:

1. Both tubes and ovaries must be in normal condition with no evident of recent or remote injury.
2. No evidence of utero-peritoneal fistular should be found.
3. The pregnancy must be related exclusively to the peritoneal surface and be diagnosed early enough. In our index case, there were tubo ovarian mass on the right tube and the left tube is adherent to the left ovary, though both structures looked apparently normal grossly. Hence for this reason, our patient is said to have a secondary type of abdominal pregnancy.

The etiology of primary abdominal pregnancy is not exactly known, however strong risk factors have been identified. The risk factors are tubal damage, pelvic inflammatory disease, multiparty, invitro-fertilization and others. In our index patient, the risk factors identified are multiparty and pelvic inflammatory disease.

The Diagnoses of extra-uterine pregnancy is very challenging (14) in our index patient, the diagnosis was missed at the peripheral hospital and even at exploratory laporatory that was done at the peripheral hospital, they still missed the diagnosis. But when she presented in our institution with the persistent abdominal pains and distention, following 8 months of amenorrhoea, abdominal pregnancy was suspected. Our suspicious was confirmed by imaging especially ultrasound.

The ultrasound features of abdominal pregnancy include:

1. The absence of myometrial tissue between the maternal bladder and their pregnancy.
2. An empty uterus.
3. Poor definition of the placenta
4. Oligohydraminous
5. Unusual fetal lie (1, 14)

In our case, the ultrasound findings are similar to the one aforementioned. Abdominal pregnancy could be diagnosed using magnetic resonant imaging (MRI), though it is rare (12).

Tubal pregnancy is the commonest type of ectopic pregnancy, usually rupture or aborts in early trimester and they are diagnosed early. However, abdominal pregnancy is the only ectopic pregnancy can advance beyond 20 weeks gestation.

Abdominal pregnancy is associated with life threatening complications both for the fetus and the mother, it may lead to fetal and maternal death especially if there is intra-peritoneal bleeding due to vascular rupture. (13, 16)

Once diagnosis is made, management depends on gestational age, haemodynamic stability and location of placental implantation (13, 14). In early trimester, laparoscopy, vascular embolization and Fetocide are possible management options (5,10). In late pregnancy, the main stay of management is laporatory. The fetus can be delivered easily but the decision about the management of the placenta should be made cautiously since removal of the placenta may cause torrential bleeding and maternal death. (14, 15)

The removal of the placenta should only be tried if attachment is simple and easy to remove. In our patient, the placenta was attached to the omentum which was easily separated. The placenta also was attached to the anterior wall of the uterus and it was easy to separate. The uterus was grossly normal and there were no bleeding points on the uterus after the separation.

When the placenta is attached to major vessels or pelvic side walls. It is recommended to leave the placenta in-situ and commence the patient on methotrexate when the placenta is left in-situ, it undergoes necrosis and super-infection may set in, thus increasing the risk of abscess formation and sepsis. Therefore, post-operative follow-up is very important.

Fetal malformation has been reported to be as high as 40% in abdominal pregnancy. The baby delivered in index patient was grossly normal. Reports have also shown that only 5% of the babies survive up to one week post-delivery. (7,10,14) The baby in this index patient died after 24 hours as a result of repeated apneic attacks.

CONCLUSION:

Abdominal pregnancy is a rare but life threatening type of ectopic pregnancy. Abdominal pregnancy with resultant heartily new born was also very rare.
The Diagnosis and management of abdominal pregnancy imposes a lot of challenges.

High index of suspicion for diagnosis, a good plan and adequate preparation for surgery is very vital to prevent maternal and perinatal death.

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Cite this Article: Maduagwu, AO; Onyegbule, O; Okeke, N; Egwim, AV (2023). Abdominal Pregnancy with a Live Baby at 33 Weeks Gestation – A New Case Report. *Greener Journal of Medical Sciences*, 13(1): 37-41**,** https://doi.org/10.5281/zenodo.7698305.