

Case Report

Undiagnosed advanced abdominal pregnancy: a case report

Ekundayo O. Ayegbusi*, Oluwatoyin O. Fadare, Akintunde O. Fehintola,
Akinyosoye D. Ajiboye, Akaninyene E. Ubom

Department of Obstetrics, Gynaecology and Perinatology, Obafemi Awolowo University Teaching Hospitals Complex, Ile-Ife, Osun State, Nigeria

Received: 21 September 2021

Accepted: 02 November 2021

*Correspondence:

Dr. Ekundayo O. Ayegbusi,
E-mail: folaturabbny@gmail.com

Copyright: © the author(s), publisher and licensee Medip Academy. This is an open-access article distributed under the terms of the Creative Commons Attribution Non-Commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

ABSTRACT

Abdominal pregnancy is a rare form of extra-uterine gestation in which implantation occurs in the peritoneal cavity, unlike this case it rarely reaches advanced gestation and viability of fetal outcome are not commonly documented. Abdominal pregnancy accounts for about 1-2% of ectopic gestation. It is associated with poor fetal outcome and great morbidity and mortality due to haemorrhage especially in a low resource setting. We present an undiagnosed advanced case of abdominal pregnancy of a 30 yr old unbooked G2P1+0 (1A) with early ultrasound estimation of 37 weeks and 6 days. She presented with (abdominal) labour pains and ultrasound diagnosis of breech presentation, suspicion of a bicornuate uterus and intrauterine growth restriction. She was planned for emergency cesarean delivery on this basis but found advanced abdominal pregnancy, and subsequently on delivery had good maternal and fetal outcome. Abdominal pregnancy with live fetus is extremely rare, and requires a high index of suspicion, to avoid high risk of maternal morbidity and mortality and it is also imperative for all healthcare givers to localized pregnancy whenever they get in contact with a woman who has recently missed her period.

Keywords: Advanced abdominal pregnancy, Ectopic pregnancy, Laparotomy

INTRODUCTION

Ectopic pregnancy is defined as the implantation of pregnancy outside the uterine cavity. The rate is about 1-2% of pregnancies and 95% of it occurs in the fallopian tubes.¹ Abdominal pregnancy is a form of ectopic gestation in which the pregnancy implants in the peritoneal cavity, the incidence however, varies in the literature. It accounts for about 1:10,000 to 1:30,000 (about 1%) of all ectopic pregnancies.^{1,2} The sites of implantation include the omentum, pelvic side wall, the Douglas pouch, spleen, bowel, liver, large pelvic vessels, diaphragm, and uterine serosa.³

The incidence is higher in women of low-and middle-income countries and this can be attributed to low socioeconomic status, high rate of pelvic inflammatory disease or pelvic infection, history of infertility, tubal sterilization, tubal reconstruction surgery and pregnancy

with intra uterine device.⁴ Abdominal gestation is associated with higher risk of morbidity and mortality compared to intrauterine gestation and tubal ectopic pregnancy, its maternal mortality rate is about 0.5-18% and perinatal mortality rate is as high as 40-75%.^{4,5}

Abdominal pregnancy can be primary or secondary. Primary abdominal pregnancy is rare and it is defined by proposed criteria of Studdiford; (1) presence of normal fallopian tubes (2) absence of uteroperitoneal fistula and, (3) must be early enough to exclude secondary implantation in the peritoneal cavity.⁴ the secondary type is seen commonly and occurs usually as a result of ruptured tubal ectopic gestation.⁴

Diagnosis could be very challenging especially in uncomplicated cases as the symptoms are unspecific and frequently missed because it is not considered. The symptoms range from abnormal fetal lie or presentation,

painful fetal movements, recurrent abdominal pains, frequent bowel movements, urinary symptoms and vaginal bleeding are commonly seen.⁵ The most helpful of them all in advanced abdominal pregnancy is persistent abnormal lie and displacement of the cervix on vaginal examination.⁵

We hereby report a case of undiagnosed advanced abdominal pregnancy at 37 weeks with good maternal and fetal outcome.

CASE REPORT

Our patient is a 30 yr old, petty trader, unbooked G2P1+0(1A) at 37 weeks and 6 days, who was unsure of date (EGA extrapolated from early ultrasound at 14 weeks). She was referred from a primary health center on account of ultrasound diagnosed fetal malpresentation however, presented in labour. She had antenatal clinic at the referring health center though inconsistently attended, pregnancy was largely uneventful except for occasional painful abdominal pain during fetal movements. She had two ultrasonography done, the latest was done while in labour, it revealed active fetus in breech presentation with reduced liquor volume at EGA of 34 weeks and suspected bicornuate uterus, because of the presence a smaller separate uterus. There was a past associated history of 6 years secondary infertility for which she sought no medical evaluation.

At presentation, she looked generally stable and vital signs were within normal limits. Abdominal examination revealed a symphysio-fundal height lesser than term gestation, there was a tense abdomen with no obvious palpable contraction. A singleton fetus in longitudinal lie and breech presentation was palpated with a fetal heart rate of 156 beats per minutes, cervix was difficult to locate, displaced and cervical os was closed with no evidence of vaginal bleeding. She was counselled for emergency c-section and subsequently had laparotomy with a finding of abdominal pregnancy intraoperatively.

The baby was found in a thick intact amniotic sac with scanty liquor, the sac was attached to the omentum, partly to the mesentery of large bowel and the fundus of the uterus. A live male neonate was delivered weighing 1.8 kg with good cry and activity, no gross congenital anomaly noted. The placenta was attached to about two-third of the amniotic sac, uterine fundus and partially burrowed into a small portion of the omentum, which was resected together with the sac with good haemostasis. Only the fundus of the uterus was visible intraoperatively; the body of the uterus, both ovaries and fallopian tubes were all buried in adhesion. She had a unit of blood transfused. Baby was admitted to neonatal intensive care unit (NICU) on account of low birth weight. Both mother and the baby were discharged on the fifth post-operative day in good condition. They were followed up after 4 weeks and both of them are doing well. Findings are shown in Figures 1-5.



Figure 1: The thick walled gestational within which the fetus was delivered.

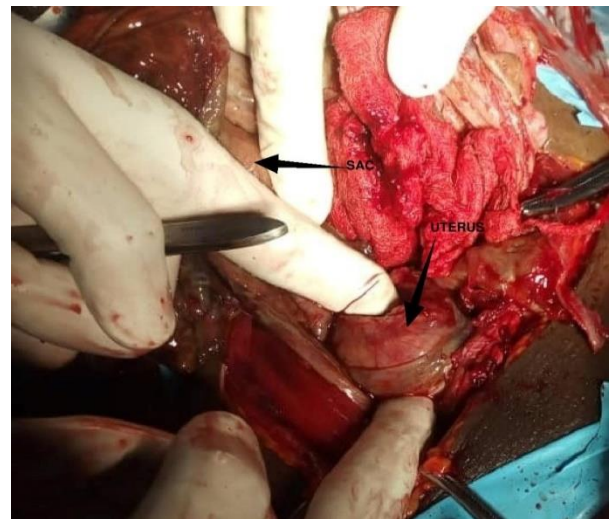


Figure 2: A slightly bulky uterus, separate from the gestational sac.

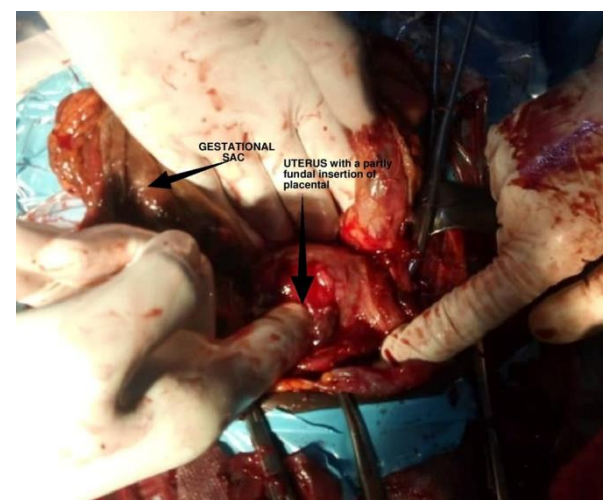


Figure 3: Uterus with the raw area of the partly inserted placental.

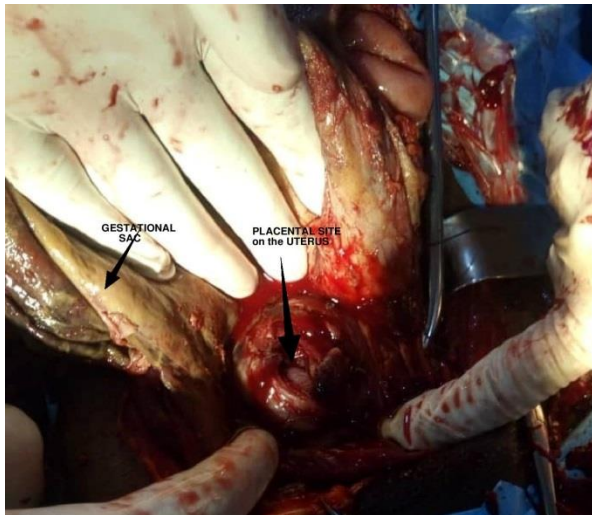


Figure 4: Gestational sac clearly separated from the uterus with the partially inserted placental site.

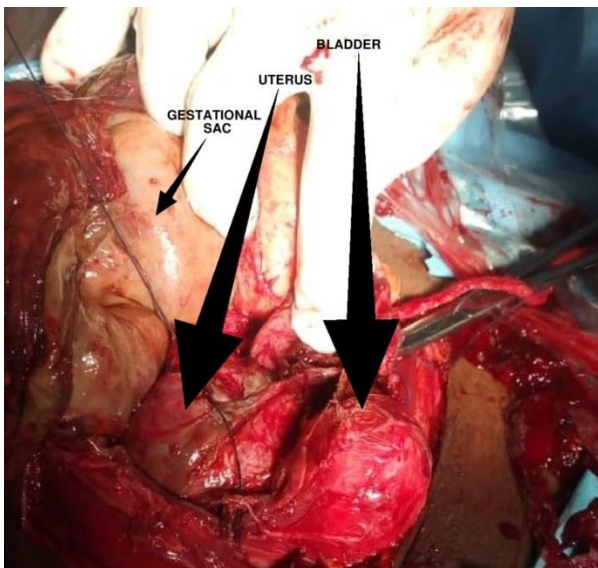


Figure 5: The gestational sac, uterus and bladder clearly separated.

DISCUSSION

Advanced abdominal pregnancy (AAP) is extremely rare and is defined as pregnancy beyond 20 weeks of gestation with a live fetus, or showing signs of having once lived and developed, in the mother's abdominal cavity.^{5,6} Due to its wide uncommon presentation and high mortality rate, a high index of suspicion is needed for prompt diagnosis and appropriate management with this, maternal and perinatal morbidity as well as mortality can be avoided.⁷ The incidence of abdominal pregnancy varies between geographic regions but is found more in developing countries.^{4,8} The reported incidences were 1 in 10,000 deliveries in the USA, 1 in 654 and 1 in 1320 in Ibadan, Nigeria and Kumasi, Ghana respectively.⁸

The incidence is also said to appear higher in multiparous women and women of low socioeconomic status. In addition, women who were managed for pelvic inflammatory disease and infertility are also at increased risk of having abdominal pregnancy. In our case, the patient is a petty trader, who had 6 years history of infertility before conceiving this pregnancy also pelvic adhesion was found intraoperatively, and in a woman who had no prior surgery, this could be attributed to pelvic infection which is a key risk factor for abdominal pregnancy.

Diagnosis of AAP is difficult and is made on the basis of history, physical examination and ultrasonography, even though a pre-operative diagnosis is usually missed, more commonly than it is made, with only 45% of cases are diagnosed pre-operatively.⁶ Such is the case of our patient in which the diagnosis was made intra-operatively. Ultrasonography is an important tool in assessing a suspected advanced abdominal pregnancy, albeit, this can be subjective, as it depends on the skill of the sonologist, the time of presentation and the ultrasound machine used. It should however, be done early in pregnancy to properly locate and characterize the pregnancy.⁹

The most frequent and reliable findings on ultrasound includes an empty uterus seen separate from the fetus. Other signs include an ectopic intra-abdominal placenta, pseudo placenta previa appearance, oligohydramnios, lack of myometrial tissue around fetus, fetus and placenta obscured by overlying bowel gas and abnormal fetal presentation. Magnetic resonant imaging (MRI) plays an important role in its diagnosis.⁸ In the case of our patient, ultrasound at presentation was able to pick oligohydramnios, abnormal fetal presentation and a separate smaller uterus which was thought to be a bicornuate uterus. Being a low resource setting, MRI usage for better resolution is limited due to the cost and unavailability.

Abdominal pregnancy symptoms are atypical, and can mimic many pathologies in pregnancy. This includes painful fetal movements, recurrent abdominal pains, frequent bowel movements, urinary symptoms, vaginal bleeding and abnormal fetal lie on abdominal examination in advanced cases. Commonly featuring is recurrent abdominal pain, painful fetal movements and abnormal fetal lie/ presentation.⁵ The above case presented had painful fetal movements which she thought is of no significance and never reported until presentation. The fetus was also found in oblique lie and breech presentation on abdominal examination.

This kind of ectopic gestation can either be primary or secondary as stated earlier, although the latter is mostly seen.⁴ The criteria for primary abdominal pregnancy by Studdiford was well stated in the literature viz-a viz; presence of normal fallopian tubes and ovaries, no evidence of uteroperitoneal fistula and must be early enough to exclude secondary implantation. Our patient

clearly fulfilled the second criteria as no evidence of uteroperitoneal fistula was seen at the Surgery. The fallopian tubes and ovaries were buried in adhesion and the pregnancy was advanced to obviously ruled out secondary implantation.

Management depends on when the diagnosis is made, because is a life-threatening condition, pregnancy is usually terminated as soon as the diagnosis of abdominal pregnancy is made by laparotomy for better haemostasis, although laparoscopic approach has been lauded recently.^{1,6,7,9} A cautious expectant management may be carried out in selected cases, if it is diagnosed late, that is >24 weeks, with careful monitoring of maternal and fetal condition in a well-equipped setting for blood transfusion facility and emergency laparotomy.⁸ Expectant management, however, carries a risk of sudden life-threatening intra-abdominal bleeding and a generally poor fetal prognosis.

Of concern is the massive haemorrhage from placenta implantation site and is often responsible for maternal mortality which can reach up to 20-30% and as such, decision to remove or leave placenta in situ depends on the extent of placentation and skills of the surgeon.^{8,10} If placenta is adherent, torrential bleeding is anticipated on separation, cord can be cut short, leave as such and post-operative methotrexate and antibiotics can be given in such cases.^{6,7} However, some argue, that leaving the placenta in situ can result in rapid placental destruction, leading to accumulation of necrotic debris and promotion of bacterial infection therefore, increasing postoperative morbidity and mortality.^{6-8,10} In the case of our patient, placenta was easily separated from its attachment on the uterine fundus, mesentery of large bowel with less bleeding and haemostasis was easily secured. The segment which burrowed into a small portion of the omentum was resected with amniotic sac with good haemostasis.

An abdominal pregnancy is often associated with fetal deformities, such as facial and cranial asymmetry, joint abnormalities, limb deformity, and central nervous deformities in about 21% of cases. In our case, there was no evidence of deformity or abnormalities as per the team of neonatologists.¹⁰

CONCLUSION

Advanced abdominal pregnancy with a healthy new born is a rare occurrence. High index of suspicion is of necessity in diagnosing abdominal gestation and as such, for prompt management in order to prevent maternal or fetal jeopardy. Ultrasonography as well as MRI are useful in the diagnosis. Those discovered early are better terminated because of its attendant risk. The removal of placenta is for well-selected cases and is usually

dependent on findings during surgery as well as the skills of surgeon otherwise it is advised to leave placenta in situ with methotrexate and antibiotics cover. However, standardization of the treatment principles for advanced abdominal pregnancy, perioperative treatment options, and postoperative management measures would improve newborn survival, reduce complications, and mortality.

ACKNOWLEDGEMENTS

We would like to acknowledge the whole team members involved in the management.

Funding: No funding sources

Conflict of interest: None declared

Ethical approval: Not required

REFERENCES

1. Siati A, Berrada T, Baidada A. Abdominal pregnancy with a healthy newborn: A new case. *Pan Afr Med J.* 2019;34:1–5.
2. Baffoe P, Fofie C, Gandau BN. Term abdominal pregnancy with healthy newborn: a case report. *Ghana Med J.* 2011;45:81–3.
3. Yasumoto K, Sato Y, Ueda Y. Expectant management for abdominal pregnancy. *Gynecol Minim Invasive Ther.* 2017;6:82–4.
4. Hailu FG, Yihunie GT, Essa AA. Advanced abdominal pregnancy, with live fetus and severe preeclampsia, case report. *BMC Pregnancy Childbirth.* 2017;17:1–4.
5. White RG. Advanced abdominal pregnancy. A review of 23 cases. *Ir J Med Sci.* 1989;158:77–8.
6. Trivedi K, Singh L. Advanced abdominal pregnancy with a healthy newborn: a rare case report. *Int J Reprod Contraception Obstet Gynecol.* 2016;5:3583–6.
7. Isah AY, Ahmed Y, Nwobodo EI. Abdominal Pregnancy With A Full Term Live Fetus: Case Report. 2008;7:198–9.
8. Osanyin GE, Okunade KSOA. A case report of a successfully managed advanced abdominal pregnancy with favorable fetomaternal outcomes. *Trop J Obs Gynaecol.* 2017;34:240–2.
9. Sib SR, Ouédraogo I, Sanogo M. A full term abdominal pregnancy with an isthmic tubal implantation of the placenta. *BMC Pregnancy Childbirth* 2018;18:10–4.
10. Dabiri T, Marroquin GA, Bendek B. Advanced extrauterine pregnancy at 33 weeks with a healthy newborn. *Biomed Res Int.* 2014;2014: 10–3.

Cite this article as: Ayegbusi EO, Fadare OO, Fehintola AO, Ajiboye AD, Ubom AE. Undiagnosed advanced abdominal pregnancy: a case report. *Int J Sci Rep* 2021;7(12):590-3.