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Case Report

Challenges in Diagnosing Advanced Abdominal Ectopic Pregnancy in Low-Resource Settings: A Case from North Western Nigeria.

***Abbas Rabiu Muhammad[1], Shehu Abu-Yazeed[2], Safwan Mukhtar Dafi[1], Auwal Shuaibu[3], Anas Alhaji Idris[3].**

[1]Department of Radiology, Aminu Kano Teaching Hospital, Kano, Nigeria.
[2]Al Sahalil Urgent Care/Emergency Centre, Jazan, Saudi Arabia.
[3]Department of Obstetrics and gynecology, Muhammad Abdullahi Wase Teaching Hospital, Kano, Nigeria.

Abstract

Abdominal ectopic pregnancy is a rare type of ectopic pregnancy associated with high maternal and perinatal mortality.

We present a case of a 28-year-old now primipara who was misdiagnosed to have abruptio placentae and ruptured uterus on two different occasions from a primary health care center but was found to have an advanced abdominal ectopic gestation at 21 weeks gestational age. The patient was managed by exploratory laparotomy and is currently doing well.

Abdominal ectopic pregnancy, though rare, does occur in our setting, and a high index of suspicion is necessary to make a diagnosis. Prompt diagnosis will help in managing the patient hence reducing morbidity and mortality

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***Correspondence:** Abbas Rabiu Muhammad. Department of Radiology, Aminu Kano Teaching Hospital, Kano, Nigeria.
E-mail: ardederi@gmail.com.

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Introduction

Abdominal pregnancy is a pregnancy anywhere within the peritoneal cavity, exclusive of tubal, ovarian, or broad ligament location.[1] It is associated with high case fatality in pregnant women and fetuses and is classified as either primary or secondary.[2] In primary abdominal pregnancy, the blastocyst implants within the abdominal cavity while secondary abdominal pregnancy occurs when the blastocyst located elsewhere implants in the abdominal cavity.[3] Overall, this condition accounts for 1-1.5% of all ectopic pregnancies, with an approximated incidence of 1:8,000-10,000 pregnancies.[1] Abdominal pregnancy is associated with life-threatening intra-abdominal bleeding, hence the need for early diagnosis with prompt and effective management in order to decrease morbidity and mortality.[4] Advanced abdominal ectopic pregnancy is any pregnancy that is viable after 20 weeks of gestation.[5] Advanced abdominal pregnancy is rare with a reported incidence of 1:25,000 pregnancies.[2]

We present a case of a patient with advanced abdominal pregnancy at 21 weeks of gestation who presented with abdominal pain and symptoms of anemia. An emergency laparotomy was done during which an abortus and placenta were delivered.

This case report aims to underscore the diagnostic challenges and clinical implications of advanced abdominal ectopic pregnancy in a resource-limited setting, emphasizing the importance of early detection and accurate diagnosis to mitigate associated maternal and fetal risks.

Case Presentation

A 28-year-old primigravida at 21 weeks of gestation was admitted with a complaint of abdominal pain without vaginal bleeding or discharge.

The pregnancy was booked at a private facility at about 13 weeks gestational age with normal booking parameters. However, she was discovered to have a low packed cell volume of 18%, was transfused 4 pints of packed cells at booking, and was placed on oral hematinic as well as intermittent preventive therapy for malaria. Post transfusion packed cell volume was done about 72 hours and was found to be 32%. She was thereafter discharged on routine antenatal investigations including serology screening, blood group, and complete blood count. About eight weeks later, the patient was said to have presented for follow up where she presented with abdominal pain and palpitations. On examination, she was found to have mild pallor. An urgent ultrasound scan was requested at a private diagnostic center due to its unavailability at the facility, the ultrasound scan done by a technician at the private center made a conclusion of placenta abruption, however, the requesting physician based on the previous history of transfusion earlier in the pregnancy requested for a repeat scan at a different center which shows an impression of a ruptured uterus hence the need for an urgent referral for possible expert care at our center.

Further history at our center revealed that the patient attained menarche at 14 years with a cycle length of 28 days and a flow of 4-5 days. Never had family planning or pap smear done. She had no history of chronic medical conditions and no prior history of surgery. She has no known allergies. On examination, vitals were normal however, she was mildly pale. The abdomen was full, moved with respiration, moderate tenderness with fullness of both flanks. Pelvic examination was that of normal vulva and vagina with closed cervical Os. No cervical motion tenderness and no blood were seen on the examining finger. The pulse rate was 84 bpm, regular, normal volume. The blood pressure was 130/82 on the left hand, sitting and heart sounds were S1 and S2 only with no murmurs. The chest was clear with normal breath sounds and no basal crepitations.

A transabdominal Ultrasound scan at our facility revealed a single live intra-abdominal pregnancy within the peritoneal cavity with a fetal head in the right hypochondrial region abutting the liver (Fig. 1).

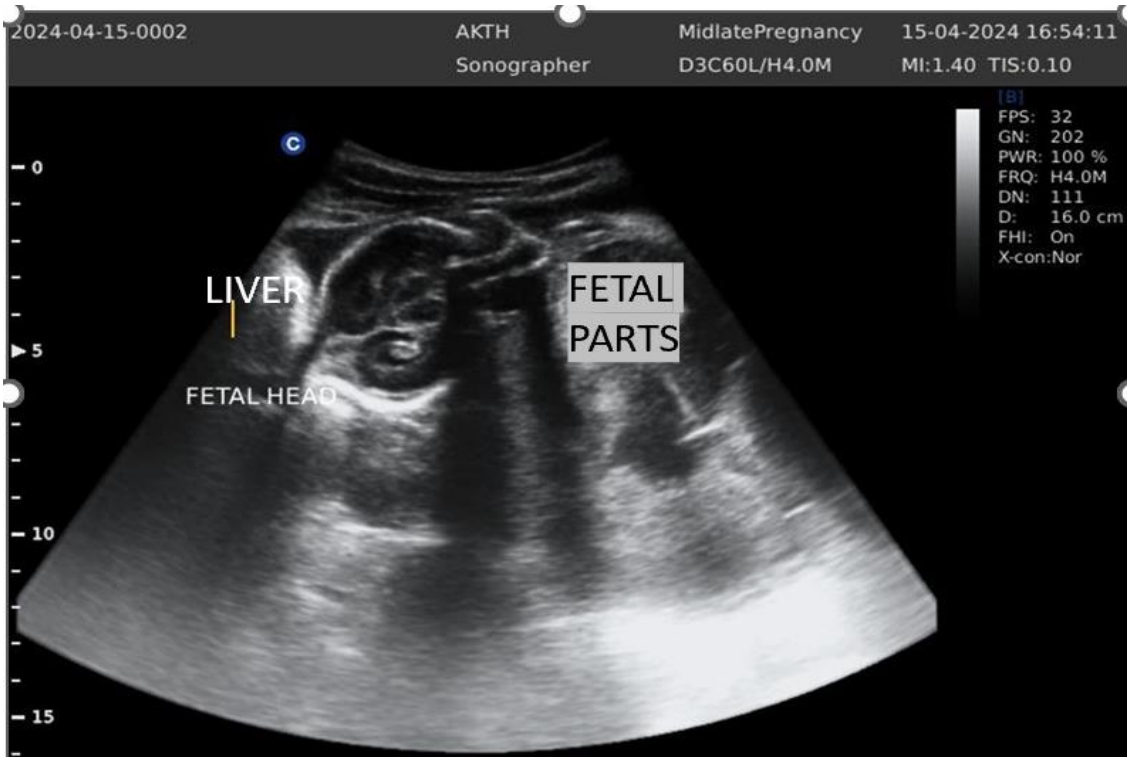

Figure 1: Transabdominal Ultrasound scan showing an intraabdominal pregnancy with the foetal head abutting the inferior edge of the liver.

The biometric parameters estimated fetal gestational age at 21 weeks. The placenta was inserted on the omentum and fundus of the uterus. No gross fetal or placental anomaly was seen. Other findings include normal normal-sized and empty uterus with both adnexae as well as pouch of Douglas (POD) within normal limits.

With a diagnosis of abdominal ectopic pregnancy, a joint clinical review was performed with the aim of conserving the pregnancy and preserving the mother's life. The patient therefore was admitted for close maternal and feotal monitoring. Following concerns of feotal viability and risk to the mother's life from deteriorating clinical features an emergency exploratory laparotomy was planned. Urgent serum electrolytes, urea, and creatinine as well as packed cell volume (PCV) were requested and were found to be within normal range except for the low PCV value of 28%. Two units of blood were grouped and cross-matched. Informed written consent was obtained from the patient. Under general anaesthesia, cleaning and draping were done with the abdomino-pelvic cavity assessed through a mid-line incision. A male abortus weighing about 700g was seen within the abdomino-pelvic cavity. A placental mass was found within the abdomen extending to attach to the lateral pelvic wall, transverse colon, and fundal part of the uterus. The abortus and placenta were delivered transabdominally. The rectus sheath was repaired and the subcutaneous tissue closed. The abdomen was closed with nylon 2/0 via interrupted stitches. The estimated blood loss was 1.2 litres. The patient was transferred to the ward and was placed on antibiotics, analgesia, and maintenance fluids. She was transfused with 2 pints of blood postoperatively after which the post transfusion PCV was 36%. The patient was discharged 5 days post-op and was seen a week later with no complaint. The patient is currently doing well on oral hematinic and oral contraceptives.

The initial diagnosis of abruptio placentae and ruptured uterus at peripheral facilities may have resulted from limited access to advanced imaging techniques and specialist sonographers/radiologists.

Discussion

The clinical manifestation of abdominal pregnancy is often non-uniform, and there are no pathognomic markers that differentiate it from tubal pregnancy. Because of this, treating and diagnosing abdominal pregnancy continues to be challenging.[9]

The majority of abdominal pregnancies are diagnosed at an advanced gestational age, but even then, an abdominal pregnancy may remain unnoticed, making treatment more difficult.[12]

This is similar to our case where the patient presented at 21 weeks of gestation. Mothers are usually asymptomatic during the early weeks of gestation unless complications occur.[5] In our case, the patient presented with recurrent anaemia and abdominal pain in the early weeks of the pregnancy.

Our case highlighted the importance of first-trimester obstetrics scans as well as scanning by a professional. Our patient, wo though presented early, had two scans which all gave a different and otherwise wrong diagnosis. Although ultrasound is the preferred diagnostic technique, 50% of cases were missed due to the existence of fibroids, a retroverted uterus, prenatal gestation, the operator's expertise, and the patient's body habitus.[10] In our case, the misdiagnosis might be from the operator as the patient had no coexisting uterine fibroids nor a retroverted uterus.

This case also signifies the importance of a transabdominal Ultrasound scan in the diagnosis of abdominal ectopic gestation in a poor resource setting like ours, despite MRI being the gold standard. [6]

Sonographic features denoting abdominal pregnancy include the fetus being seen outside the uterine cavity, oligohydramnios, fetal parts located close to the maternal abdominal wall, and abnormal location of the placenta outside the uterine cavity.[7] Sonography also remains useful in assessing fetal congenital malformations usually associated with abdominal pregnancies.[8] This is similar to the index case where the uterus was empty and the fetus was seen in the abdominal cavity with its head abutting the liver edge. However, no gross fetal anomaly was seen.

Many case reports have successfully managed abdominal pregnancies expectantly until delivery, however, due to the high morbidity and mortality associated with such cases, termination of pregnancy via laparotomy is advised if diagnosis is established before 24 weeks of gestation.[5] The pregnancy in this case was lost at 21 weeks of gestation. A tertiary center with sophisticated newborn care services, including surgery and vascular surgery skills should handle such patients and in the case of an emergency birth, cross-matched blood must be easily accessible, and steps must be taken to prevent serious obstetric haemorrhage.[11]

Conclusion

Abdominal ectopic is a rare type of ectopic pregnancy associated with high maternal and perinatal mortality. Clinical presentation is similar to that of gastrointestinal problems hence a high index of suspicion is needed for early detection and treatment. Clinical history and physical examination alone may be insufficient to make a preoperative diagnosis. Sonography is an effective method for diagnosing an abdominal pregnancy.[7] Despite the wide availability of ultrasound scanning, cases continue to be missed in resource-poor settings like ours due to late antenatal clinic enrolment. Laparotomy remains the treatment modality of choice to avoid life-threatening complications.

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