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## ■ Case Report

# Advanced Abdominal Pregnancy in a Tertiary Health Centre in North-Central Nigeria: A Case Report

Akunaeziri, A.U., Alao, A.I., Tunde-Olatunji, Olubunmi, A., Afolabi, A.F., Pam, S., Igwemadu, G.T., Ezekwere, S.C.

*Department of Obstetrics & Gynaecology, Federal Medical Centre, Keffi, Nasarawa State, Nigeria*

### ABSTRACT

Abdominal pregnancy is a rare complication of pregnancy. It is a type of ectopic pregnancy with very high maternal and fetal complications. A 27-year-old G3P2 (2A) at 32 weeks who presented on account of recurrent abdominal pain associated with fetal movement. An ultrasound scan revealed an abdominal pregnancy. She was managed conservatively till 34 weeks and had an exploratory laparotomy. Intraoperative findings were a live female fetus lying freely in the abdominal cavity encircled in omental tissue. Saucer shaped placenta tissue morbidly adherent to the uterine fundus. The mother and baby recovered and were discharged. This was a rare case of late presentation of advanced abdominal pregnancy. The patient had laparotomy and delivery of a live baby, and the placenta was successfully excised from the fundus.

**Keywords:** Abdominal pregnancy, ectopic pregnancy, advanced.

### Corresponding Author

Dr. Ezekwere, S.C. (MBBS, FWACS)  
Department of Obstetrics &  
Gynaecology, Fed. Med. Centre,  
Keffi, Nasarawa State, Nigeria  
Email: [ezekweresamuel@gmail.com](mailto:ezekweresamuel@gmail.com)  
Phone: +234 802 326 2823

### Introduction

Abdominal (peritoneal) ectopic pregnancy (EP), can be defined as EP occurring within the peritoneal cavity exclusive of tubal, ovarian, or broad ligament locations.<sup>1</sup> It can be either primary or secondary.<sup>2</sup> Primary abdominal pregnancy is rare and represents a very rare form of EP (1% of all EP).<sup>3</sup> In developing countries, it is responsible for about 4 to 10% of all pregnancy related deaths.<sup>3</sup> The incidence of abdominal ectopic pregnancies varies among different populations, with a rate of 1:10 000 to 1:30 000 pregnancies, and being most

common in developing countries with scarce resources and limited diagnostic facilities.<sup>4</sup>

The incidence reflects the prevalence of pelvic inflammatory disease and ectopic pregnancy in different regions.<sup>5</sup> The highest incidence worldwide is in the South African Bantu tribes, where it is reported that 2.2% of the ectopic pregnancies are of the abdominal variety. The incidence in Nigeria is about 1 in 2941.<sup>6</sup> In Papua New Guinea, the incidence is one abdominal pregnancy per 62 cases of ectopic pregnancies, giving a rate of 1.6%. However, in the United States of America, it has an

incidence of 1.09 per 10,000 births with 9.2 abdominal pregnancies per 1000 ectopic gestation.<sup>5</sup>

Maternal mortality is most commonly as a result of severe intra-abdominal hemorrhage as well as infection. In the USA, the risk of dying due to an abdominal pregnancy is eight times greater than that of a tubal pregnancy, and 90 times greater than from an intrauterine pregnancy.<sup>5</sup>

Perinatal mortality in cases of abdominal pregnancy is also very high, ranging between 40 and 95%.<sup>5</sup> This is usually as a result of friability and vascularity of the placental implantation site, with fetal growth retardation and fetal abnormalities, both being major problems.<sup>5</sup>

This report details a case of an advanced abdominal pregnancy who had an exploratory laparotomy at 34 weeks and had a live neonate.

### Case Report

Our patient was a 27-year-old G3P2+0(2A) at 32 weeks who presented to the obstetrics emergency with a month history of progressively increasing abdominal pain. Pain was said to be related to and worsened by fetal movements. She had previously booked the index pregnancy at a general hospital and was told all blood investigations were normal. However, she was told there was a problem based on the ultrasound done but they couldn't make out the exact problem. She had had two previous confinements, both pregnancies were uneventful, carried to term and she had spontaneous vaginal deliveries.

On examination, we found a young woman in intermittent painful distress, she was not pale, anicteric, not dehydrated and no pedal edema. Her pulse rate and blood pressure were within normal limits. Examination of the abdomen revealed an enlarged abdomen. The uterine contour was difficult to palpate and fetal parts were easily palpable with the fetus in transverse lie. There were no contractions palpated, and the fetal heart rate was 132 beats/ minute. A pelvic examination showed a normal female external genitalia, cervix was posterior, uneffaced and closed. She was counseled on the possible diagnosis of an abdominal ectopic pregnancy. She was admitted,

had a full blood count and serum electrolytes urea and creatinine done which were essentially normal. Her blood group was 'O' positive and her genotype was 'AA'. Her urinalysis was negative for protein and glucose. Her retroviral screening, Hepatitis 'B' and 'C' screening and viral were all non-reactive. She had an abdominal ultrasound done which showed a single viable intra-abdominal fetus with an empty uterus, there was good fetal cardiac activity of 155 beats/ minute with the head antero-inferior to the right kidney and the fetus lying transversely. Placenta was attached to the fundus of the uterus with hyper vascular changes noted in the myometrium. Increased vascularity was confirmed on Doppler investigation. There was good breathing movement, good fetal tone but reduced gross body movement. There was no measurable amniotic fluid pocket between the fetus and the placenta. Fetal parts were close to the anterior abdominal wall. Estimated fetal weight was 1.7kg. The estimated gestational age was 32weeks + 6 days.

She was managed conservatively with the neonatologists for 2 weeks, she had intramuscular corticosteroids to aid fetal lung maturity, she was placed on analgesia, and maternal and fetal status were monitored closely. At 34 weeks gestation, she had an exploratory laparotomy with findings of live female fetus in lying freely in the abdominal cavity with the head lying inferior to the right lobe of the liver and the fetus was encircled by omentum. Birth weight was 2.25kg with Apgar scores were 7 and 9 in 1st and 5th minute respectively. There was no fetal amniotic membrane seen. A saucer shaped placenta morbidly adherent to the uterine fundus. The right tube and ovary were normal but the left tube and ovary were embedded within the placenta mass. Following delivery of the fetus, a uterine tourniquet was placed and the placenta and some uterine fundal tissue were excised and the fundus repaired with absorbable vicryl 2 sutures.

The baby was healthy and well and was found to have some structural abnormality of the feet, with eversion of both feet. There were no other obvious congenital anomalies.

Post-operatively mother was placed on

antibiotics, analgesics, hematinics and recovered well. Both mother and baby were discharged on the 5th day post-op. She was given a 2-week appointment to postnatal clinic. Her packed cell volume at discharge was 28%. The surgical

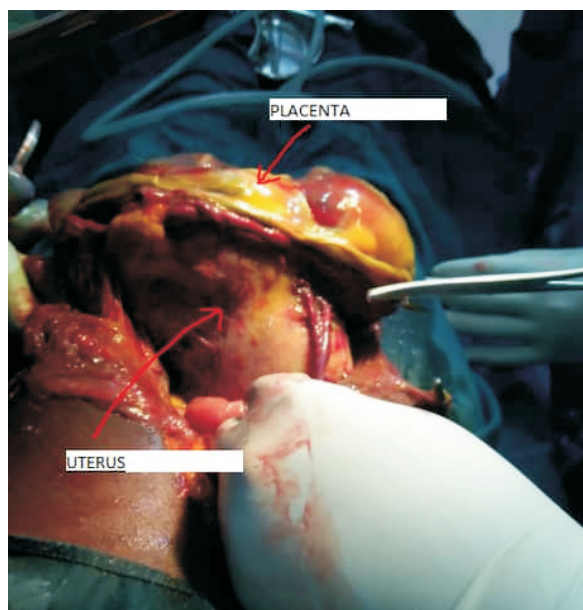
findings and risk of recurrence were discussed with the patient. She was also educated on the need for an early ultrasound scan in subsequent pregnancies. She also counseled about contraception. Despite this, she was lost to follow-up.



**Figure 1: Ultrasound scan showing Placenta attached to fundus of empty uterus**



**Figure 2: Fetus being delivered from the abdominal cavity**



**Figure 3: Placenta attached to uterine fundus**



**Figure 4: Tourniquet applied at the utero-cervical junction while placenta was excised**

## Discussion

Abdominal ectopic pregnancy is a rare disorder. Hence, a high index of suspicion is necessary for prompt diagnosis and appropriate management.<sup>7</sup> A patient with an abdominal pregnancy may have normal signs of pregnancy, but often they have non-specific symptoms such as abdominal pain, vaginal bleeding, and/or gastrointestinal symptoms.<sup>7</sup> Our patient presented late with abdominal pains which were worse with fetal movement.

A Similar presentation was reported in one case by Ani et al.<sup>8</sup> The diagnosis of an abdominal pregnancy are often missed. Only about 45% of the cases will be diagnosed during the antenatal period. This is because most patients do not present with the typical symptoms of persistent abdominal pain and/or gastrointestinal symptoms during pregnancy.<sup>9</sup>

Abdominal pregnancy can be classified as primary or secondary. It is a primary abdominal pregnancy when implantation of the fertilized ovum is directly within the peritoneal cavity.<sup>8</sup> In such cases according to Studdiford criteria, the ovaries and tubes appear normal, there is no utero-peritoneal fistula, and the pregnancy is exclusively on the peritoneal surface.<sup>3</sup> Secondary abdominal pregnancy is the more common of the two where there is a secondary implantation of a primary tubal pregnancy in the peritoneal cavity.<sup>8</sup> Primary abdominal pregnancy is rarely seen.<sup>8</sup>

There should be a suspicion of an abdominal pregnancy when the fetal parts can easily be felt or the lie is abnormal. An abdominal ultrasound is very helpful in the diagnosis as it can show that the fetus is outside an empty uterus, with an absence of amniotic fluid between the placenta and the fetus, no uterine wall surrounding the fetus, fetal parts being close to the abdominal wall, and the fetus being in abnormal lie.<sup>10</sup> These were the findings in our patient.

It is generally recommended that an immediate laparotomy should be performed when a diagnosis of an abdominal pregnancy is made.

However, if the pregnancy is advanced beyond 24 weeks, the baby is alive, and medical support systems are in place. A conservative approach could be considered with careful monitoring to bring the baby to as close as possible to 34 weeks.<sup>3</sup> In our patient a laparotomy was performed at 34 weeks after giving corticosteroids to enhance fetal lung maturity.

Babies of abdominal pregnancies usually have skeletal abnormalities due to compression in the absence of the amniotic fluid buffer. The rate of malformations and deformations is estimated to be about 21%; typical deformations are facial, cranial and joint abnormalities. The most common malformations are limb defects and central nervous malformations.<sup>3</sup> The baby of our patient had joint abnormalities of the feet.

Following delivery of the baby, placental management often proves difficult. In normal deliveries, the uterine contractions provide an important mechanism to control blood loss; however, in an abdominal pregnancy, the placenta is located over tissues that lack the ability to contract and attempts at its removal could result in significant blood loss. Generally, except the placenta can be easily removed, it is advisable to leave it in-situ and allow for a natural regression.<sup>3</sup> The involution process may take about 4 months and is monitored by checking human chorionic gonadotropin levels. Methotrexate could be used to hasten placental regression. Placental vessels have also been blocked by angiographic embolization.<sup>3</sup> In the index case the placenta was adherent to the fundus of the uterus and no other major structures and was successfully excised.

## Conclusion

We presented a rare case of late presentation of advanced abdominal pregnancy. The patient had laparotomy and delivery of a live baby, and the placenta was successfully excised from the fundus.

- **Declaration of interest statement:** We declare no conflict of interest.

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