

Medical Case Report

HSI Journal (2023) Volume 4 (Issue 2):572-576. <https://doi.org/10.46829/hsijournal.2023.12.4.2.572-576>



Open  
Access

# Advanced secondary abdominal pregnancy: a case report

Teresa A MENSAH<sup>1</sup>, Alex K BOATENG<sup>1</sup>, Kwaku DOFFOUR-DAPAAH<sup>1</sup>, Isaac ERSKINE<sup>2</sup>,  
Jerry COLEMAN<sup>1</sup>, Samuel A OPPONG<sup>3</sup>, Alim SWARRAY-DEEN<sup>3\*</sup>

<sup>1</sup> Department of Obstetrics & Gynaecology, Korle Bu Teaching Hospital, Accra, Ghana; <sup>2</sup> Department of Pathology, Korle Bu Teaching Hospital, Accra, Ghana; <sup>3</sup> Department of Obstetrics & Gynaecology, University of Ghana Medical School, Accra, Ghana

Received June 2023; Revised October 2023; Accepted November 2023

## Abstract

**Background:** Abdominal pregnancy, although a rare condition, has life-threatening consequences. This case report aims to expose the clinical and diagnostic challenges encountered in its management. We report a case of a 28-year-old gravida 2, para 1 woman, 35 weeks pregnant, who presented to Korle Bu Teaching Hospital with generalised abdominal pain and an ultrasound indicating a major-degree placenta previa. A repeat ultrasound assessment identified a viable abdominal pregnancy with the placenta attached to the uterine fundus. An emergency hysterectomy was done on account of a massive haemorrhage after the delivery of a live female foetus.

**Keywords:** abdominal pregnancy, ectopic pregnancy, hemoperitoneum, laparotomy, ultrasound,

Cite the publication as Mensah TA, Boateng AK, Doffour-Dapaah K, Erskine I, Coleman J, Oppong SA, Swarray-Deen A (2023) Advanced secondary abdominal pregnancy - a case report. HSI Journal 4 (2):572-576. <https://doi.org/10.46829/hsijournal.2023.12.4.2.572-576>

## INTRODUCTION

Abdominal pregnancies are very uncommon. They are associated with significant maternal and foetal morbidity and may go undiagnosed if managed by inexperienced practitioners. The association of abdominal pregnancies with significant adverse perinatal outcomes necessitates the need for a high index of suspicion to improve its detection in order to reduce the adverse complications that have been associated with this condition.

## CASE

Our case was a 28-year-old woman, gravida 2, para 1, who had a previous caesarean section on account of foetal distress three years prior to the index presentation. She had a single prior antenatal visit at 15 weeks gestation at a health centre where an ultrasound scan performed indicated a single viable intrauterine gestation, and all other laboratory investigations were unremarkable. She was subsequently referred to a District Hospital because of the previous caesarean section. She, however, defaulted and never had

antenatal visits until 35 weeks, when she complained of generalised abdominal pain. She presented to a District Hospital where an ultrasound scan reported a single viable intrauterine gestation with a foetus in a transverse lie, associated with oligohydramnios and major-degree placenta previa. She was subsequently referred to Korle Bu Teaching Hospital (KBTH) for further management. She had no history of bleeding per vaginam, no loss of liquor and the patient could perceive foetal movements. She was asymptomatic of anaemia and had no urinary symptoms. On examination, she was in obvious pain and was mildly pale. Her blood pressure was 151/99 mmHg. Her pulse rate, respiratory rate, temperature and oxygen saturation were 110/min, 20/min, 37.2<sup>o</sup>C and 98%, respectively. On abdominal examination, the abdomen was enlarged, with generalised tenderness marked in the periumbilical and epigastric regions. The symphysis fundal height was 30cm, transverse lie, with the foetal parts very easily palpable. The foetal heart rate was 128 beats per minute, and uterine contractions were not palpated. A transabdominal bedside scan revealed a single viable foetus but an absence of surrounding myometrial tissue between the sac and the maternal bladder. The empty uterus was identified in the pelvis with the placenta attached to the uterine fundus.

\* Corresponding author  
Email: [asdeen8@gmail.com](mailto:asdeen8@gmail.com)

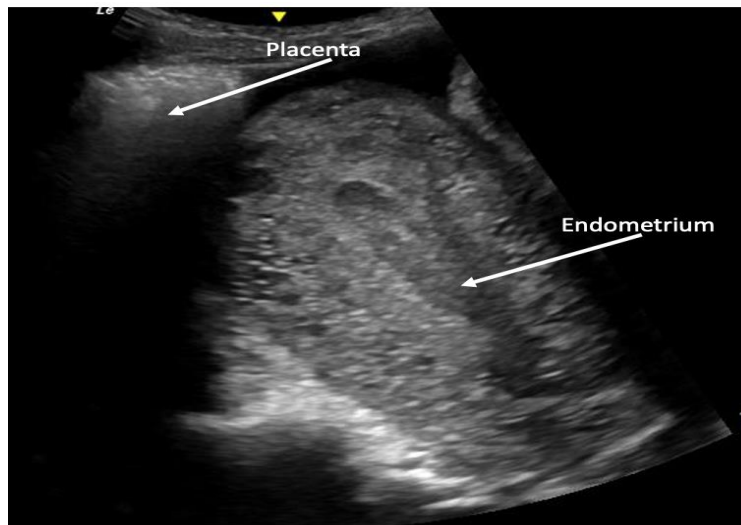


Figure 1: Ultrasound image of an empty normal-sized anteverted uterus with placenta attached to the uterine fundus.



Figure 2: (a) intraoperative finding of a foetus in an intact amniotic sac in the abdominal cavity (b) opening of the amniotic sac with delivery of the foetus

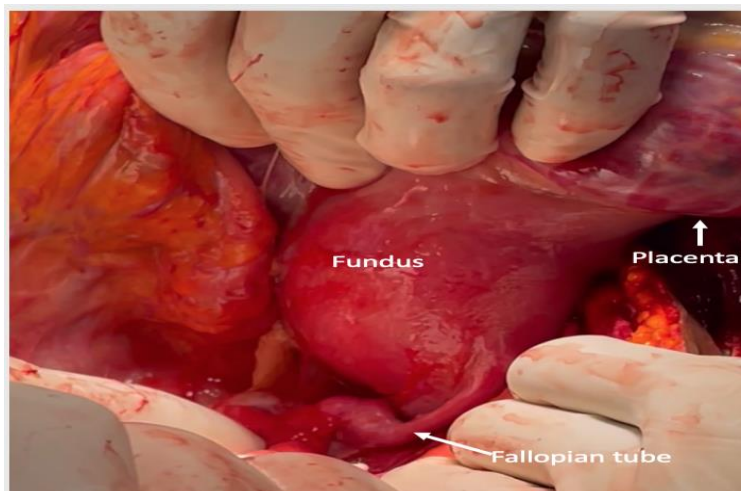


Figure 3: Posterior surface of uterus showing the fundal attachment of placenta



Figure 4: Pictures showing the gross pathology of the uterus and placenta (a) uterus and cervix with placenta attached to the uterine fundus (b) defect identified at the fundus of the uterus (c) cut-section of uterus and cervix (d) cut section of uterus and placenta, with fistula tract demonstrated with a dotted line

There was minimal fluid in the pouch of Douglas but no free fluid in Morrison's pouch. Colour Doppler imaging was applied to map out the extent of the placenta attachment and indicated no other placental extension or attachment. (Figure 1). Based on these findings, a diagnosis of advanced abdominal pregnancy was made, and the patient was prepared for emergency laparotomy. Intraoperatively, a live foetus was seen within an intact amniotic sac in the abdominal cavity. The sac was opened and delivered to a live female weighing 1805g, with Apgar scores of 4 and 6 at one and five minutes, respectively (Figure 2) (Supplementary video - [https://kbthghana-my.sharepoint.com/:v:/g/personal/a\\_swarray-deen\\_kbth\\_gov\\_gh/EbqsUDRluFBIIfDoRWiVhlyBJCwlpR-4MkzeJbR9LinA6w?e=j5Dncq](https://kbthghana-my.sharepoint.com/:v:/g/personal/a_swarray-deen_kbth_gov_gh/EbqsUDRluFBIIfDoRWiVhlyBJCwlpR-4MkzeJbR9LinA6w?e=j5Dncq)).

The placenta was implanted on the fundus of the uterus, the left broad ligament and the omentum. Both fallopian tubes and ovaries were normal (Figure 3). There was no bowel or major vessel attachment, and there was no haemoperitoneum. However, whilst inspecting the placental attachment, there was a massive haemorrhage

from the placental bed. The haemorrhage could not be controlled; thus, a hysterectomy was done with conservation of the right ovary. The estimated blood loss was 3.2 litres, and the patient received four units of blood and four units of fresh frozen plasma. The patient made an uneventful recovery and was subsequently discharged on postoperative day eleven with an HB of 11.6g/dl together with a live female baby. On gross inspection of the specimen, a fistula was identified through the fundus of the uterus. Histologic assessment of the specimen revealed infiltration of the myometrium by mature chorionic villi, dilated vessels within the myometrium, and histologically normal endometrium. (Figure 4).

## DISCUSSION

Abdominal pregnancy is a type of pregnancy in which the foetus lies within the peritoneal cavity. It is a rare, life-threatening condition that usually requires a high index of suspicion and early intervention to prevent poor obstetric outcomes [1]. It is broadly classified as primary or secondary, depending on the initial site of blastocyst implantation. It is classified as Secondary if an abdominal



pregnancy occurs after tubal rupture or abortion or uterine rupture with secondary implantation into the peritoneal cavity. A distinction between early and advanced abdominal pregnancy depends on whether the diagnosis was made before or after 20 weeks. The index case, therefore, is a secondary advanced abdominal pregnancy. Abdominal pregnancy accounts for about 1% of ectopic pregnancies, with the majority being secondary abdominal pregnancies [2]. In some African studies, abdominal pregnancy rates of 1:654 (Ibadan, Nigeria), 1:750 (Tanzania), and 1:1,947 (South Africa) have been reported, all of which were much higher than the 1:10,000 - 30,000 reported for developed countries [3]. These higher frequencies have been reported because of low socio-economic status and poor utilisation of antenatal services by pregnant women, resulting in unrecognised early ectopic pregnancies [4]. At the Komfo Anokye Teaching Hospital in Ghana, an incidence of one advanced abdominal pregnancy in 43.7 ectopic pregnancies and one advanced abdominal pregnancy in 1,320 deliveries was reported by Opare-Addo [5].

Only 50% of women with abdominal pregnancy have any risk factors linked with it [6]. Secondary abdominal pregnancy commonly occurs as a result of a tubal pregnancy that detaches into the abdominal cavity (tubal abortion) or a cornual/ caesarean scar ectopic that ruptures into the abdominal cavity [7]. Again, more exceptional situations, such as iatrogenic uterine perforation following a pregnancy termination, may also occur [8]. The presence of a fistula tract along the fundus of the uterus is highly suggestive of prior instrumentation, but as demonstrated by Rossier et al., obtaining a full disclosure about induced abortions, especially from women in LMICs of poor socio-economic backgrounds, is infrequent [9], perhaps due to very high levels of stigma [10]. Despite comparatively permissive legislation, abortion is strongly stigmatised in Ghana. As a result, many abortions go unrecorded in official medical records, and precise data on abortion rates and unplanned pregnancies are scarce [11]. Diagnosis may pose a challenging task to the obstetrician as patients may be asymptomatic or present with non-specific symptoms. Therefore, a high index of suspicion, especially in high-risk patients, is needed. Symptoms include painful foetal movements, bleeding per vaginum, abdominal pain, nausea, vomiting or constipation if bowel or omental invasion is present [12,13]. Signs may include an abnormal foetal lie, easily palpable foetal parts, abdominal tenderness, foetal growth restriction, absent foetal heart rate, failed induction of labour or absence of labour at term. The index case presented with lower abdominal pain and painful foetal movements, and an abdominal examination revealed abdominal tenderness with easily palpable foetal parts and a transverse lie. Ultrasound is the first-line diagnostic modality. Features that suggest an abdominal pregnancy include a foetus in a gestational sac outside an empty uterus, with the absence of myometrium between the foetus and maternal abdominal wall or urinary bladder.

Visualisation of the placenta outside the uterine cavity or in the peritoneal cavity is also a sign, although it may be challenging to identify the exact location. Abdominal pregnancies are missed in about 50% of cases in the second and third trimesters using ultrasound [14]. MRI may be a helpful adjunct when ultrasound images are suboptimal [12,14]. Although diagnosis can be made with imaging, most cases are diagnosed intraoperatively during surgical exploration. A review of cases has identified only about 45% of cases diagnosed preoperatively [13,15]. Management depends on several factors and should be managed by a multidisciplinary care team. Hemodynamically unstable patients require emergency laparotomy. Stable patients with live foetuses may either have expectant management with delivery planned at 32 – 35 weeks or termination of pregnancy. The most controversial issue is the management of the placenta. The optimal management of the placenta is unclear, as various methods have been described. The choice should consider the perceived risk of haemorrhage or damage to invaded structures. If attempts are made to remove the placenta, the blood supply must be identified and ligated. If the placenta is left in situ, adjuvant therapies like arterial embolisation, mifepristone or methotrexate may be used. However, this approach increases the risk of sepsis, haemorrhage, fistula formation and intestinal obstruction. The index case had a hysterectomy and conservation of the right ovary because initial attempts at dissection led to torrential bleeding. Advanced abdominal pregnancy is associated with high maternal and foetal morbidity and mortality. Recent studies have reported an incidence of 12% maternal mortality, 80% maternal haemorrhage requiring blood transfusion, 72% foetal mortality and 20 - 40% foetal morbidity and anomalies [14]. Although uncommon, successful outcomes have been reported, but these occur when a preoperative diagnosis is made, and careful planning and optimum management are given.

## Conclusion

Advanced abdominal pregnancy is a rare and life-threatening condition. A heightened clinical suspicion is required to aid its diagnosis. Appropriate training of obstetricians to improve diagnostic techniques is also crucial if more successful outcomes are expected in the future.

## DECLARATIONS

### Ethical considerations

The patient provided informed consent for receiving treatment and the publication of this report. All authors consented to the publication of the manuscript.

### Consent to publish

All authors agreed to the content of the final paper.

### Funding

None

### Competing Interest

No potential conflict of interest was reported by the authors.

### Author contributions

ASD and TAE conceptualised the report. ASD, TEA, AKB, KDD, IE, JC and SAO contributed to manuscript preparation and revision. All the authors critically revised the manuscript and approved the submitted version.

### Acknowledgements

The authors acknowledge all the members of the Perioperative Unit, NICU and Department of Pathology, KBTH, for their assistance in the clinical care of the patients.

### Availability of data

Data is available upon request to the corresponding author. Supplementary material - [https://kbthghana-my.sharepoint.com/personal/a\\_swarray-deen\\_kbth\\_gov\\_gh/\\_layouts/15/stream.aspx?id=%2Fpersonal%2Fa%5Fswarray%2Ddeen%5Fkbth%5Fgov%5Fgh%2FDocuments%2Fabd%20preg%20KBTH%2Emp4&ga=1](https://kbthghana-my.sharepoint.com/personal/a_swarray-deen_kbth_gov_gh/_layouts/15/stream.aspx?id=%2Fpersonal%2Fa%5Fswarray%2Ddeen%5Fkbth%5Fgov%5Fgh%2FDocuments%2Fabd%20preg%20KBTH%2Emp4&ga=1)

### REFERENCES

- Gure T, Sultan S, Alishum R, Ali A, Dibaba B, Beker I, Tsegaye S (2021) Term Abdominal Pregnancy with Live Baby: Case Report from Hiwot Fana Specialized University Hospital, Eastern Ethiopia. *Int Med Case Rep J* Volume 14:689–695.
- Singh Y, Singh SK, Ganguly M, Singh S, Kumar P (2016) Secondary abdominal pregnancy. *Med J Armed Forces India* 72:186–188.
- Rohilla M, Joshi B, Jain V, Neetimala, Gainer S (2018) Advanced abdominal pregnancy: a search for consensus. Review of literature along with case report. *Arch Gynecol Obstet* 298:1–8.
- Talom AK, Ymele FF, Dingom MN, Fouedjio J (2021) Abdominal Pregnancy: Epidemiological, Diagnostic, Therapeutic and Prognostic Aspects: A Case Report from the Yaounde Central Hospital (Cameroon). *Open J Obstet Gynecol* 11:381–390.
- Opare-Addo HS, Deganus S (2000) Advanced Abdominal Pregnancy: A Study of 13 Consecutive Cases Seen in 1993 and 1994 at Komfo Anokye Teaching Hospital, Kumasi, Ghana. *Afr J Reprod Health* 4:28.
- Kopelman ZA, Keyser EA, Morales KJ (2021) Ectopic pregnancy until proven otherwise ... even with a negative serum hCG test: A case report. *Case Rep Womens Health* 30:e00288.
- McDougall A, Morin A, Kuzmich T, Odejinmi F (2022) Advanced abdominal pregnancy: challenges, update and review of current management. *Obstet & Gynaecol* 24:195–204.
- Hernández Núñez J, Abreu Díaz A, Michael Ndwambi N, Luis Martínez F (2017) Ectopic abdominal pregnancy due to uterine perforation after an attempt to terminate pregnancy: a case presentation. *Medwave* 17:e7000–e7000.
- Rossier C, Marchin A, Kim C, Ganatra B (2021) Disclosure to social network members among abortion-seeking women in low- and middle-income countries with restrictive access: a systematic review. *Reprod Health* 18:114.
- Astbury-Ward E, Parry O, Camwell R. Stigma, abortion, and disclosure -findings from a qualitative study. *J Sex Med.* 2012;9(12):3137–3147
- Keogh SC, Otupiri E, Chiu DW, Polis CB, Hussain R, Bell SO, Nakua EK, Larsen-Reindorf R (2020) Estimating the incidence of abortion: a comparison of five approaches in Ghana. *BMJ Glob Health* 5:e002129.
- Pednekar G (2013) Successful outcome in a near-term Secondary Abdominal pregnancy presenting as Diagnostic Dilemma. *IOSR J Dent Med Sci.*8:83–86.
- Worley KC, Hnat MD, Cunningham FG (2008) Advanced extrauterine pregnancy: diagnostic and therapeutic challenges. *Am J Obstet Gynecol* 198:297.e1-297.e7.
- Lockhat F, Corr P, Ramphal S, Moodley J (2006) The value of magnetic resonance imaging in the diagnosis and management of extra-uterine abdominal pregnancy. *Clin Radiol* 61:264–269.
- Nkusu Nunyalulendho D, Einterz E (2008) Advanced abdominal pregnancy: case report and review of 163 cases reported since 1946. *Rural Remote Health* 8:1087

Thank you for publishing with

