

Case Report

Second trimester Abdominal Pregnancy: A Case Report in a Resource Limited Setting

Jimah B Bashiru^{1*}, Ewurama A Idun², Micheal K Amedi², Jeffery E Mozu², Ali Saine³, Lydia N. Terkper² and Bennet Danquah³

¹Department of Medical Imaging, School of Medical Sciences, University of Cape Coast, Cape Coast, Ghana

²Department of Radiology, 37 Military Hospital, Accra, Ghana

³Department of Obstetrics and Gynecology, 37 Military hospital, Accra, Ghana

Abstract

Introduction: Abdominal pregnancy is a rare form of ectopic pregnancy with very high fetomaternal morbidity and mortality. Diagnosis and management can pose difficulties in low-resource centres. High index of suspicion is vital in making a prompt diagnosis.

Case Presentation: A 23-year-old, gravida 2, para 1, who presented with a two-day history of severe abdominal pain was referred from a satellite clinic. Abdominal ultrasound scan revealed a live 18-week 5-day intra-abdominal pregnancy. Emergency laparotomy showed an intact gestational sac at the superior aspect of the uterus with massive hemoperitoneum. The placenta was attached to the right ovary, omentum, and fimbriae of the right fallopian tube.

Conclusion: Abdominal pregnancy is a rare occurrence and requires a high index of suspicion for prompt diagnosis. Massive hemoperitoneum can be life-threatening and prompt surgical intervention is key in saving the life of the mother.

Keywords: Abdominal laparotomy; Ectopic pregnancy; Hemoperitoneum

Introduction

Ectopic pregnancy represents about 1-2% of all pregnancies with 95% occurring in the fallopian tube and abdominal pregnancies represent just about 1% of ectopic pregnancies [1]. Abdominal pregnancy is defined as pregnancy anywhere within the peritoneal cavity, exclu-

***Corresponding author:** Jimah B Bashiru, Department of Medical Imaging, School of Medical Sciences, University of Cape Coast, Cape Coast, Ghana, Tel: +233 553299210; Email: jimah@uccsms.edu.gh

Citation: Bashiru JB, Idun EA, Amedi MK, Mozu JE, Saine A, et al. (2021) Second trimester Abdominal Pregnancy: A Case Report in a Resource Limited Setting. J Clin Stud Med Case Rep 8: 0125.

Received: November 08, 2021; **Accepted:** November 12, 2021; **Published:** November 19, 2021

Copyright: © 2021 Bashiru JB, et al. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

sive of tubal, ovarian, or broad ligament locations [1]. The Pouch of Douglas (POD) is the most common location of abdominal pregnancy followed by the mesosalpinx and omentum [1]. However, implantation into other abdominal organs such as the spleen, liver, and appendix is also reported [2].

Primary abdominal pregnancy occurs when the gestational sac attaches directly to the abdominal peritoneum. In most cases, abdominal pregnancies are secondary, and the most common mechanism is implantation into the peritoneum after a tubal abortion. The abdominal pregnancy rates range between 1:10,000 and 1:30,000 in the population, and it represents 1% of extrauterine pregnancies [3]. Abdominal pregnancies are related to a high-risk of maternal morbidity and mortality with an estimated maternal and perinatal mortality of 0.5-18% and 40-95%, respectively [4,5].

Risk factors associated with abdominal pregnancy include tubal damage, pelvic inflammatory disease, endometriosis, assisted reproductive techniques, and multiparity. The diagnosis of abdominal pregnancy can be very problematic. These pregnancies can go undetected until an advanced gestational age, resulting in term pregnancy or complicated by massive hemoperitoneum [5]. Advanced abdominal pregnancy carries a risk of disseminated intravascular coagulation, bowel obstruction, and fistulae to the gastrointestinal and/or genitourinary tracts. The site of implantation and availability of vascular supply determine the possibility of fetal survival [6]. Clinical history and physical examination alone may be insufficient to make a preoperative diagnosis. Sonography is the most effective method for diagnosing an abdominal pregnancy. MRI is an emerging important, complementary imaging modality that helps not only to confirm the diagnosis but also to delineate the precise anatomical relationship between the fetus and various maternal abdominal organs.

Prompt diagnosis of extra-uterine pregnancy is important to prevent high mortality and morbidity associated with missed diagnosis.

We present a case of intra-abdominal pregnancy at 18 weeks 5 days, complicated by hemoperitoneum and successfully managed surgically.

Case Presentation

A 23-year-old woman (Gravida 2, Para 0) with a history of one previous pregnancy who presented to a satellite clinic with a two-day history of severe lower abdominal pain. She admitted taking an abortifacient to terminate the pregnancy. She had a history of vaginal bleeding with associated lower abdominal pain subsequent to her attempted termination which lasted 7 days, 8 weeks prior to presentation. She also experienced vaginal bleeding with associated lower abdominal pain of 5 days duration, 2 weeks before presentation. She took no ultrasound scans because she believed the pregnancy had been terminated.

She had a surgical history of one previous caesarean section 3 years prior and no known chronic disease. There was no history of bleeding per vaginum at presentation. Speculum exam showed a

closed cervix with no blood in the os. A bedside ultrasound done at the obstetrics department showed multiple uterine fibroids and an impression of degenerating uterine fibroids were made. Confirmatory ultrasound scan revealed a single live abdominal pregnancy at 18 weeks 5 days with massive free intra-abdominal fluid collection with internal echoes consistent with hemoperitoneum. The gestational sac was attached to the serosal surface of the uterine fundus. The fetal heart rate was 153bpm. The placenta was noted just inferior to the anterior abdominal wall at the level of the umbilicus, centrally, 12.7mm from the skin. The uterus was empty and anteverted. Both ovaries appeared normal in size and echopattern. The estimated gestational age was 18 weeks 5 days using biparietal diameter and femur length (Figures 1 A-D).

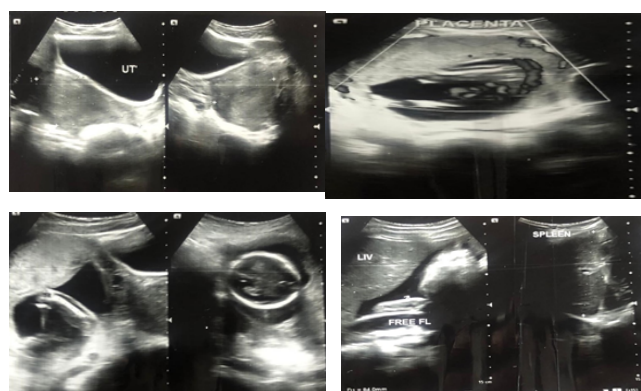


Figure 1: A-D. A. Sonogram showing empty uterus posterior to the anechoic urinary bladder. B. Sonogram showing placenta below the anterior abdominal wall. C. Sonogram showing fetal femur and fetal head. D. Sonogram showing free fluid in the abdomen consistent with hemoperitoneum.

The liver, spleen, gall bladder, pancreas, and kidneys showed normal sonographic appearance. The bowel was normal with no evidence of dilatation or fistula in the aforementioned gestational sac. Labs at presentation were: Haemoglobin 7.0g/dl, MCV 83.3fL, MCH 27.5pg, Platelet count 217, WBC 10.22, Her BP was 120/65mmHg, temperature 36.8 degree Celsius, pulse 113bpm and respiratory rate was 22. There was progressive hypotension and worsening of her vitals despite fluid resuscitation over a period of 1hour. Her pulse was 110, respiratory rate increased to 26, and her blood pressure fell to 90/60mmHg. She was transfused 4 units of blood post-operatively. Exploratory laparotomy was done on account of worsening vital signs and respiratory distress. Intra-operative findings confirmed a well-formed extra-uterine fetus in a gestational sac at the superior aspect of the uterus with an estimated weight of 200g and a massive hemoperitoneum. The estimated blood loss was 4litres. The placenta was attached to the right ovary, omentum, and fimbriae of the right fallopian tube. The left ovary and fallopian tube were normal (Figure 2). The placenta was evacuated and a damage control right salpingectomy with preservation of the right ovary. Her immediate postoperative condition was satisfactory with a blood pressure of 100/70, pulse of 70bpm, and respiratory rate of 16cpm. Her haemoglobin came up to 8g/dl with an MCV of 82.2fL, MCH of 28.0 pg, Platelet count of 44, WBC 15.05.

Discussion

Abdominal pregnancy is exceedingly rare. It is a type of extrauterine pregnancy where implantation of the fertilized ovum occurs in the abdominal cavity referred to as primary or secondary abdominal

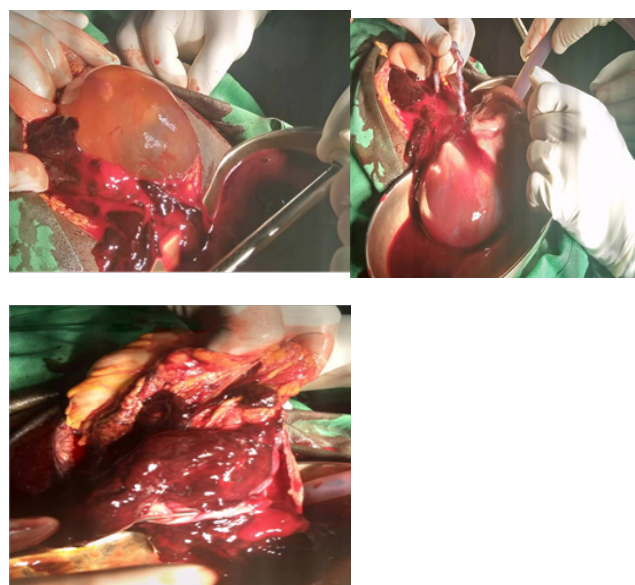


Figure 2: A-C. Intraoperative findings showing intact gestational sac (A), fetus within the sac extruded into the kidney dish with intact umbilical cord (B), and massive hemoperitoneum (C).

pregnancy occurs following re-implantation of an aborted or ruptured tubal pregnancy, the latter is the commoner of the two types [2]. It is often difficult to establish whether the abdominal pregnancy is primary or secondary.

In a review at the Komfo Anokye Teaching Hospital, Ghana, Opare-Addo et al reported an incidence of 1:1320 deliveries Whilst Amirtha et al. cited 1:25000 deliveries in India [3,4]. The reported incidences of maternal and perinatal mortality are, respectively, 0.5-8% and 45-90% [5].

The diagnosis of abdominal pregnancy requires vigilance from the obstetrician and sonographer. The high index of suspicion on the part of the obstetrician in the index case led to the diagnosis. The presenting complaint, the history and subsequent physical examination are often inconclusive and more so when there is a history of attempted abortion in the index case.

Although there may be great variability in symptoms, they may present with severe lower abdominal painful fetal movements, vaginal bleeding, and varying degrees of anaemia, however, the commonest symptom is lower abdominal pain as seen in the index case [2]. Some patients may present with persistent gastrointestinal symptoms.

However, the risk factors for abdominal pregnancy are the same as those for tubal pregnancy. The recent use of progesterone-only pills and intrauterine devices with a history of surgery, pelvic inflammatory disease, and sexually transmitted disease, increases the risk of ectopic pregnancy [2].

It is a diagnostic challenge with ~ 55% missed during the antenatal period [6]. The index case was missed in the first trimester. Missed cases portends life-threatening complications.

Ultrasonography remains the imaging modality of choice worldwide and more so in low-resource countries, however, in equivocal cases Magnetic resonance imaging is used to resolve the diagnosis. Ultrasound scan is cheap and readily available, however operator

dependent, and often leads to missed diagnosis. MRI is an expensive, long procedure time, and not readily available. MRI is contraindicated in patients with surgical implants, pace makers and patients who are claustrophobic [2]. In low resource settings, MRI is not readily available and hence ultrasonography remains the most readily accessible and affordable imaging modality to aid diagnosis. In the first trimester, both transvaginal and transabdominal ultrasound scan remains the first-line tool for diagnosis. MRI can help define the extent of abdominal and pelvic organ invasion by the placental tissue if not contraindicated [2]. Ultrasound scan features of abdominal pregnancy include an empty uterus, fetal parts close to the anterior abdominal wall, absent or near absent amniotic fluid around the fetus.

Termination of abdominal pregnancy is indicated when the pregnancy threatens the life of the mother due to its attachment to vital organs and the presence of hemoperitoneum. The clinical picture of deteriorating vital signs and the ultrasound findings of significant intraperitoneal fluid were life-threatening in the index case. Intraoperatively, there was an extra uterine fetus in the gestational sac at the superior aspect of the uterus with massive hemoperitoneum. About 4L of blood was evacuated from the peritoneal cavity. The placenta was attached to the right ovary, omentum, and fimbriae of the right fallopian tube. These features were consistent with preoperative ultrasound scan findings.

The management of the placenta depends on the attachment to vital organs. Because the abdominal organs lack the ability to contract and prevent bleeding, it is generally recommended to leave the placenta insitu and allow the natural process of regression and follow-up on ultrasound scan and human chorionic gonadotropin levels [7]. In the index case, the placenta was easily removed and hemostasis secured. She was transfused with 4 units of whole blood and her post-operative condition was satisfactory.

Conclusion

Pre-operative diagnosis of abdominal pregnancy requires a high index of suspicion, thorough clinical and imaging assessment. This allows prompt diagnosis to safe mother in the early stages. Patients with amenorrhea with persistent abdominal pain and ultrasound assessment of an empty uterus should raise the suspicion of abdominal pregnancy. Ultrasound scan is routinely used to make the diagnosis even though MRI may be helpful. The decision to keep the pregnancy or intervene depends on the presence or absence of life-threatening complications such as hemorrhage. Fetal anomalies are common with term fetuses and counselling must be in depth to allow the woman make an informed decision in keeping or terminating the pregnancy.

Consent

Written informed consent was obtained from the patient for publication of this case report and any accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal.

Competing interests

The authors declare that they have no competing interests.

Author's Contribution

JBB, EAI, MKA, JEM, AS, LNT and BD contributed equally to the concept, clinical management of the patient, writing of the paper, manuscript review and editing. All authors approved the final version.

Availability of Data

All relevant data are provided in the manuscript.

Funding

None

References

1. Worley KC, Hnat MD, Cunningham FG (2008) Advanced extrauterine pregnancy: diagnostic and therapeutic challenges. *Am J Obstet Gynecol* 198: 1-7.
2. Gurjar R (2018) Full-Term Live Secondary Abdominal Pregnancy : A Rare Case Report. *J Obstet Gynecol India* 69: 36-39.
3. Opere-Addo HS DS (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 Heal* 4: 28-39.
4. Amritha B, Sumangali T, Priya B, Deepak S, Sharadha R (2009) A rare case of term viable secondary abdominal pregnancy following rupture of a rudimentary horn: A case report. *J Med Case Rep* 3: 1-3.
5. Martin JN Jr, Sessums JK, Martin RW, Pryor JAM (1988) Abdominal pregnancy: current concepts of management. *JC Obs Gynecol* 71: 549-557.
6. Dahab AA, Aburass RSW (2011) Full-term extrauterine abdominal pregnancy: a case report. *J Med Case Rep* 5: 531.
7. Jianping Z, Fen LQS (2008) Full-Term Abdominal Pregnancy. A Case Report and Review of the Literature. *Gynecol Obs Invest* 65: 139-141.



- Advances In Industrial Biotechnology | ISSN: 2639-5665
- Advances In Microbiology Research | ISSN: 2689-694X
- Archives Of Surgery And Surgical Education | ISSN: 2689-3126
- Archives Of Urology
- Archives Of Zoological Studies | ISSN: 2640-7779
- Current Trends Medical And Biological Engineering
- International Journal Of Case Reports And Therapeutic Studies | ISSN: 2689-310X
- Journal Of Addiction & Addictive Disorders | ISSN: 2578-7276
- Journal Of Agronomy & Agricultural Science | ISSN: 2689-8292
- Journal Of AIDS Clinical Research & STDs | ISSN: 2572-7370
- Journal Of Alcoholism Drug Abuse & Substance Dependence | ISSN: 2572-9594
- Journal Of Allergy Disorders & Therapy | ISSN: 2470-749X
- Journal Of Alternative Complementary & Integrative Medicine | ISSN: 2470-7562
- Journal Of Alzheimers & Neurodegenerative Diseases | ISSN: 2572-9608
- Journal Of Anesthesia & Clinical Care | ISSN: 2378-8879
- Journal Of Angiology & Vascular Surgery | ISSN: 2572-7397
- Journal Of Animal Research & Veterinary Science | ISSN: 2639-3751
- Journal Of Aquaculture & Fisheries | ISSN: 2576-5523
- Journal Of Atmospheric & Earth Sciences | ISSN: 2689-8780
- Journal Of Biotech Research & Biochemistry
- Journal Of Brain & Neuroscience Research
- Journal Of Cancer Biology & Treatment | ISSN: 2470-7546
- Journal Of Cardiology Study & Research | ISSN: 2640-768X
- Journal Of Cell Biology & Cell Metabolism | ISSN: 2381-1943
- Journal Of Clinical Dermatology & Therapy | ISSN: 2378-8771
- Journal Of Clinical Immunology & Immunotherapy | ISSN: 2378-8844
- Journal Of Clinical Studies & Medical Case Reports | ISSN: 2378-8801
- Journal Of Community Medicine & Public Health Care | ISSN: 2381-1978
- Journal Of Cytology & Tissue Biology | ISSN: 2378-9107
- Journal Of Dairy Research & Technology | ISSN: 2688-9315
- Journal Of Dentistry Oral Health & Cosmesis | ISSN: 2473-6783
- Journal Of Diabetes & Metabolic Disorders | ISSN: 2381-201X
- Journal Of Emergency Medicine Trauma & Surgical Care | ISSN: 2378-8798
- Journal Of Environmental Science Current Research | ISSN: 2643-5020
- Journal Of Food Science & Nutrition | ISSN: 2470-1076
- Journal Of Forensic Legal & Investigative Sciences | ISSN: 2473-733X
- Journal Of Gastroenterology & Hepatology Research | ISSN: 2574-2566
- Journal Of Genetics & Genomic Sciences | ISSN: 2574-2485
- Journal Of Gerontology & Geriatric Medicine | ISSN: 2381-8662
- Journal Of Hematology Blood Transfusion & Disorders | ISSN: 2572-2999
- Journal Of Hospice & Palliative Medical Care
- Journal Of Human Endocrinology | ISSN: 2572-9640
- Journal Of Infectious & Non Infectious Diseases | ISSN: 2381-8654
- Journal Of Internal Medicine & Primary Healthcare | ISSN: 2574-2493
- Journal Of Light & Laser Current Trends
- Journal Of Medicine Study & Research | ISSN: 2639-5657
- Journal Of Modern Chemical Sciences
- Journal Of Nanotechnology Nanomedicine & Nanobiotechnology | ISSN: 2381-2044
- Journal Of Neonatology & Clinical Pediatrics | ISSN: 2378-878X
- Journal Of Nephrology & Renal Therapy | ISSN: 2473-7313
- Journal Of Non Invasive Vascular Investigation | ISSN: 2572-7400
- Journal Of Nuclear Medicine Radiology & Radiation Therapy | ISSN: 2572-7419
- Journal Of Obesity & Weight Loss | ISSN: 2473-7372
- Journal Of Ophthalmology & Clinical Research | ISSN: 2378-8887
- Journal Of Orthopedic Research & Physiotherapy | ISSN: 2381-2052
- Journal Of Otolaryngology Head & Neck Surgery | ISSN: 2573-010X
- Journal Of Pathology Clinical & Medical Research
- Journal Of Pharmacology Pharmaceutics & Pharmacovigilance | ISSN: 2639-5649
- Journal Of Physical Medicine Rehabilitation & Disabilities | ISSN: 2381-8670
- Journal Of Plant Science Current Research | ISSN: 2639-3743
- Journal Of Practical & Professional Nursing | ISSN: 2639-5681
- Journal Of Protein Research & Bioinformatics
- Journal Of Psychiatry Depression & Anxiety | ISSN: 2573-0150
- Journal Of Pulmonary Medicine & Respiratory Research | ISSN: 2573-0177
- Journal Of Reproductive Medicine Gynaecology & Obstetrics | ISSN: 2574-2574
- Journal Of Stem Cells Research Development & Therapy | ISSN: 2381-2060
- Journal Of Surgery Current Trends & Innovations | ISSN: 2578-7284
- Journal Of Toxicology Current Research | ISSN: 2639-3735
- Journal Of Translational Science And Research
- Journal Of Vaccines Research & Vaccination | ISSN: 2573-0193
- Journal Of Virology & Antivirals
- Sports Medicine And Injury Care Journal | ISSN: 2689-8829
- Trends In Anatomy & Physiology | ISSN: 2640-7752

Submit Your Manuscript: <https://www.heraldopenaccess.us/submit-manuscript>