



## A Case Report of Advanced Primary Abdominal Pregnancy On the Uterine Fundus with A Surviving Healthy Newborn and Good Maternal Condition

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**Citation:** Abdelhafez SM, Fyala AE, Youssef H, Shams M (2018) A Case Report of Advanced Primary Abdominal Pregnancy On the Uterine Fundus with A Surviving Healthy Newborn and Good Maternal Condition. J Preg Child Health: JPCH-102. DOI: 10.29011/JPCH-102.100002

**Received Date:** 1 October, 2018; **Accepted Date:** 30 October, 2018; **Published Date:** 7 November, 2018

### Abstract

**Objective:** To present a case of advanced abdominal pregnancy that was misdiagnosed as a case of placenta Previa complete centralis with uterine rupture.

**Case report:** The patient was a 32-year old woman pregnant in the 35th week of gestation, with prior three deliveries by Cesarean Section (CS). She presented with a complaint of lower abdominal pain, for which she was hospitalized. Based upon ultra-sonographic findings, the patient was suspected to be a case of placenta Previa complete centralis accrete. With worsening of the abdominal pain on the next day of admission, uterine rupture was suspected, especially that the fetal head appeared in contact with the maternal liver by ultrasound and a moderate amount of free fluid appeared in the Douglas pouch. However, laparotomy revealed primary abdominal pregnancy with morbidly adherent placenta to the uterine fundus. A viable female fetus with no evident birth defects was delivered and supra- vaginal hysterectomy was performed.

**Conclusion:** Abdominal pregnancy is a rare condition, which may be overlooked during antenatal care (ANC). Its diagnosis requires a high degree of suspicion, especially with its clinical and radiologic clues.

**Keywords:** Abdominal Pregnancy; Ectopic Pregnancy; Morbidly Adherent Placenta; Peritoneal Sac

### Introduction

Abdominal pregnancy is a rare form of ectopic pregnancy, accounting for 1.4% of all ectopic pregnancies, and 1:10000 to 1:25000 of all pregnancies [1]. It results from implantation of a gestational sac in any structure within the peritoneal cavity excluding tubal, ovarian, or intraligamentous implantations [2]. It may be either primary or secondary to tubal pregnancy. Risk factors for abdominal pregnancy include multiparity, previous uterine surgery, Pelvic Inflammatory Disease (PID), endometriomas and Assisted Reproductive Techniques (ART) [3-4]. Advanced abdominal pregnancy refers to a pregnancy that continues beyond 20 weeks of gestation, a condition reported to be associated with high maternal and fetal morbidity and mortality. Hemorrhage, infection and coagulopathy are the most important causes of

maternal morbidity and mortality. Fetal limb deformities, joint abnormalities, Central Nervous System (CNS) anomalies, and facial or cranial asymmetries are the most common reported birth defects [5]. Diagnosis of advanced abdominal pregnancy is difficult, requiring a high degree of clinical and radiological suspicion. Moreover, its management differs according to gestational age and site of implantation. We would like to present a case of advanced primary abdominal pregnancy that resulted in a living healthy female newborn after laparotomy.

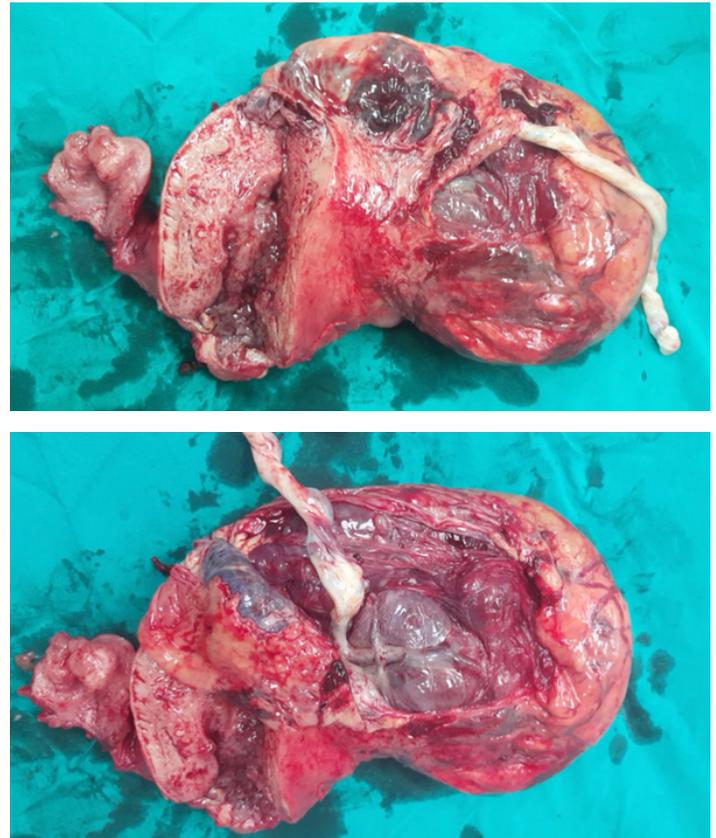
### Case Report

The patient was a 32-year old woman pregnant in the 35<sup>th</sup> week of gestation, with a gravidity of four and parity of three. She gave consent for publication of this case report and the accompanying images. On May 25, 2016, the patient presented to the emergency unit of Obstetrics and Gynecology department in Mansoura University Hospitals, with a complaint of lower

abdominal pain for four hours, for which she received analgesics and antispasmodics with no relief of her complaint. The patient has been married for nine years and has three living offspring (one male and two females). She was hypertensive on alpha methyl dopa 250 mg twice daily since the fifth month of pregnancy. She delivered three times before by Cesarean Section (CS) and underwent an open appendectomy. The patient received full dose of antenatal corticosteroids at the 32<sup>nd</sup> week of gestation. Upon clinical examination, pulse was 120 bpm, blood pressure was 130/90 mmHg, proteinuria was negative by dipstick test and the fetus was in a transverse lie with no vaginal bleeding. After performing an abdominal ultrasound scan, the patient was suspected to be a case of placenta Previa complete centralis accrete. The patient was admitted and received intravenous fluids, antibiotics, analgesics, and antispasmodics for abdominal pain, which was excluded to be of uterine origin, due to absence of true labor pains. Fetal cardiocography (CTG) was reactive. Complete Blood Count (CBC) revealed leukocytosis with a White Blood Cells (WBCs) count of 16600/mm<sup>3</sup>. Surgical consultation was requested for exclusion of possible causes of acute abdomen, such as cholecystitis, pancreatitis, and intestinal obstruction. Serum lipase and amylase were sampled and erect abdominal X-ray was performed.

On the next day, with worsening of the clinical condition of the patient, she was re-evaluated with abdominal ultrasound, which revealed a viable fetus in oblique lie with fetal head in contact with the maternal liver and a moderate amount of free fluid collected in the Douglas pouch. Besides, the uterine cavity looked empty. A provisional diagnosis of uterine rupture was proposed, and the patient was prepared for emergent laparotomy after taking a written consent from her and her husband. Laparotomy was performed under general anesthesia through Pfannenstiel incision. The fetus was intraperitoneal and it was extracted as breech. The umbilical cord was double clamped and cut. The uterus was exteriorized through the abdominal incision. The placenta with a thick walled ruptured amniotic sac was found to be attached to the serosal surface of the uterine fundus near the left cornu. On trial of placental separation from the uterus, severe bleeding occurred with no plane of separation, so supra-vaginal hysterectomy was performed. Two intraperitoneal drains were inserted and the abdomen was closed in layers. The patient was transferred to Intensive Care Unit (ICU) for follow up.

The patient received four units of blood (two intraoperatively and two postoperatively) and five units of platelets postoperatively. The patient had uneventful postoperative period and was discharged after four days in good health. The newborn was female weighing 2.2 kg and had no evident congenital malformations. She was vigorous with normal Apgar score at five minutes and did not need admission to the Neonatal Care Unit (NCU). Cut section in the hysterectomy specimen revealed empty uterine cavity with the placenta attached to the fundus (Figure 1).



**Figure 1:** The hysterectomy specimen with cut section in the anterior wall of the uterus showing empty uterine cavity with the placenta attached to the fundus near to the left cornu.

## Discussion

As we mentioned before, abdominal pregnancy can be easily missed during Antenatal Care (ANC). Many ultrasonic findings have been suggested as clues for diagnosis of this condition, such as the fetus being separate from the uterus, absent myometrium between the fetus and urinary bladder, abnormal fetal position, and unusual maternal vasculature in the placental periphery [6]. However, ultrasonic diagnosis remains a dilemma, with a diagnostic error of about 50-90% [7]. In our case, both placenta Previa complete centralis accrete and uterine rupture were suspected. Magnetic resonance imaging (MRI) is useful in suspected cases when ultrasound is inconclusive. Our case was advanced abdominal pregnancy of primary type according to Studdiford's criteria which include findings of normal bilateral fallopian tubes and ovaries, absence of uteroperitoneal fistula and the presence of a pregnancy related to the peritoneal surface exclusively [8]. There are various management plans for such cases of advanced abdominal pregnancy. Preoperative angiographic embolization has been proposed as a safe and effective method to reduce blood loss [9]. Intraoperatively, controversies arise whether to remove

or leave the placenta, especially if it is adherent to highly vascular areas such as the liver and iliac vessel region. Risks of leaving the placenta in situ include sepsis, intestinal obstruction and internal hemorrhage. Postoperative methotrexate therapy has been proposed in case the placenta is left, with regular follow up with serum levels of quantitative beta subunit of human chorionic gonadotropin ( $\beta$ -HCG) and Doppler ultrasonography [10-11]. However, the role of methotrexate remains questionable. Fortunately, in our case, the placenta was adherent to the uterine fundus, so supra-vaginal hysterectomy was decided.

## Conclusion

abdominal pregnancy is a rare condition, which may be overlooked during ANC. Its diagnosis requires a high degree of suspicion, especially with its clinical and radiologic clues. Management of such a condition differs according to gestational age and site of implantation. It is worth noting that timely intervention can reduce maternal as well as perinatal morbidity and mortality associated with abdominal pregnancy.

## References

1. Worley KC, Hnat MD, Cunningham FG (2008) Advanced extra uterine pregnancy: diagnostic and therapeutic challenges. *Am J Obstet Gynecol* 3: 297.
2. Cunningham FG, Leveno KJ, Bloom SL, Spong CY, Dashe JS, et al. (2014) Ectopic pregnancy. In: Sheffield JS, editors. *Williams Obstetrics*. 24th ed. New York: McGraw-Hill 377-395.
3. Huang K, Song L, Wang L, Gao Z, Meng Y, Lu Y (2014) Advanced abdominal pregnancy: an increasingly challenging clinical concern for obstetricians. *Int J Clin Exp Pathol* 9: 5461-5472.
4. Dabiri T, Marroquin GA, Bendek B, Agamasu E, Mikhail M (2014) Advanced extrauterine pregnancy at 33 weeks with a healthy newborn. *Biomed Res Int*.
5. Stevens CA (1993) Malformations and deformations in abdominal pregnancy. *Am J Med Genet* 8: 1189-1195.
6. Sherer DM, Dalloul M, Gorelick C, Kheyman M, Abdelmalek E, et al. (2007) Unusual maternal vasculature in the placental periphery leading to the diagnosis of abdominal pregnancy at 25 weeks' gestation. *J Clin Ultrasound* 5: 268-273.
7. Teng HC, Kumar G, Ramli NM (2007) A viable secondary intra-abdominal pregnancy resulting from rupture of uterine scar: role of MRI. *Br J Radiol* 80: 134-146.
8. Studdiford WE (1942) Primary peritoneal pregnancy. *American Journal of Obstetrics and Gynecology* 3: 487-491.
9. Demendi C, Langmar Z, Banhidy F, Borzsonyi B, Csatlós E, et al. (2011) Successful operative management of an intact second trimester abdominal pregnancy with additional preoperative selective catheter embolization and postoperative methotrexate therapy. *Med Sci Monit* 5: 53-55.
10. Cetinkaya MB, Kokcu A, Alper T (2005) Follow up of the regression of the placenta left in situ in an advanced abdominal pregnancy using the Cavalieri method. *J Obstet Gynaecol Res* 1: 22-26.
11. Valenzano M, Nicoletti L, Odicino F, Cocuccio S, Lorenzi P, et al. (2003) Five-year follow-up of placental involution after abdominal pregnancy. *J Clin Ultrasound* 1: 39-43.