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Case Report

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Successful Expectant Management of an Incidental Extra-uterine Abdominal Pregnancy: A Case Report at Muhimbili National Hospital, Eastern Tanzania

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1. Introduction

Extrauterine abdominal pregnancy is a rare type of ectopic pregnancies associated with a high mortality rate. The level of maternal mortality is estimated to be at 8times higher than that of other ectopic tubal pregnancies and is 90 times higher than intrauterine pregnancies. Symptoms are variable and not specific and usually resemble the other types of ectopic pregnancies. Most cases of abdominal pregnancies are secondary and the most common mechanism is an implantation on 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 1.4% of extra-uterine pregnancies and are related to a high-risk of maternal morbidity and mortality. We present a case of extra-uterine abdominal pregnancy, diagnosed and successfully managed with good maternal and fetal outcomes at Muhimbili National Hospital.

2. Case Presentation

A 34 years-old, G3P2L2 patient presented at 29weeks of gestation with a diffuse abdominal pain, she was referred at our facility from a close referring primary health facility due to suspected abdominal pregnancy. On physical examination mother was alert, afebrile, not dyspnoeic, not pale, not jaundiced with no lower limbs oedema and she had a tender abdominal palpation at around the umbilical region with a mobile palpable mass around the periumbilical region separated from the uterus. A urinary pregnancy test was done of which the result came positive, followed by transabdominal ultrasound which revealed a single live fetus according to gestational age, while a transvaginal ultrasound showed a normal uterus without an intrauterine gestation. After thorough evaluation and assessment, the diagnosis of an extrauterine abdominal pregnancy was established. Patient was counselled and admitted for expectant management of the pregnancy aimed to deliver her at 34weeks of gestation. While in the ward the mother underwent a weekly serial transabdominal ultrasound to assess the foetal condition as well as the placental status. At 34weeks of gestation, full blood counts, PT, PTT renal function and liver function test were performed of which all were within normal range, blood grouping and cross-match was also done and 4units of whole blood was prepared. Laparotomy was performed at 34weeks on maternal request due to persistent abdominal discomfort with pains due foetal movement. A supraumbilical laparotomy was performed and intraoperatively a live health male baby with Birth weight of 2200grams and APGAR score of 8 in the first minutes and 10 in the fifth minutes was extracted leaving the placenta in situ which was attached at posterior wall of the uterine fundus, bleeding was controlled well and haemostasis was achieved without difficult. Since the mother was given general anaesthesia, the baby was admitted to Intermediate Care Unit in the Neonatal Intensive Care Unit (NICU) for observation due to prematurity. The baby was handed to the mother on the second postoperative week, with a satisfactory health response and no difficulties encountered during the hospitalization. Both mother and the baby were uneventful during postnatal evaluation and were discharged on the 15th day. Serum Human chorionic gonadotropin (hCG) levels of the mother was taken 48hours after delivery for follow up it was found to drop from 115.592 UI/mL to 40.840 mUI/mL during postoperative first week, and it was undetectable at 6th week post-operative. Postoperative a serial abdominal-pelvic sonography was performed of which it revealed normal abdominal findings on the 4th week. This case report shows that anticipatory of an extrauterine abdominal pregnancy detected early is possible if a close follow up is done.

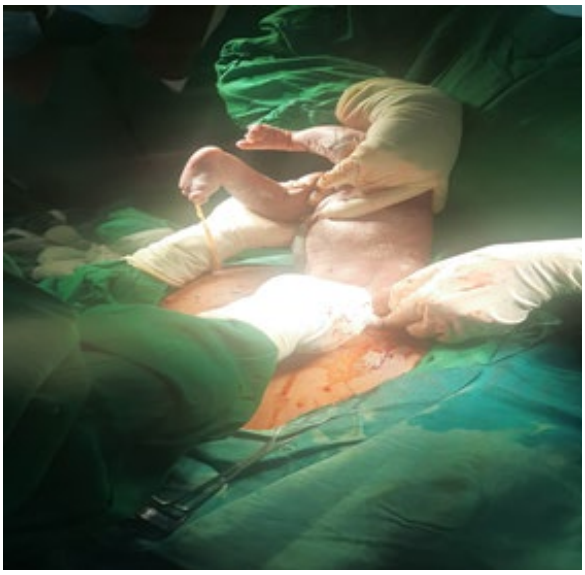

Figure 1: Extraction of the Live Baby at the Supraumbilical Region

Figure 2: Live Baby is Given Care after Delivery

3. Discussion

Extra uterine abdominal pregnancy is a rare, life-threatening condition defined as pregnancy in the peritoneal cavity exclusive of tubal, ovarian, or intraligamentary locations. It can be primarily located in the peritoneal cavity or secondary [1, 2]. Primary abdominal pregnancy occurs when the gestational sac attaches directly in the abdominal peritoneum while the secondary abdominal pregnancy occurs due to ruptured ectopic pregnancies that originated in the tubes or, less commonly, the ovaries and reimplant in the peritoneum where the embryo or fetus continues to grow [3]. Secondary Abdominal pregnancy can also be the consequence of an intrauterine pregnancy after a rupture of a hysterectomy scar, or a uterine perforation or a rupture of a rudimentary horn [4].

Most of cases of extra uterine abdominal pregnancies are secondary. The Pouch of Douglas is the most common location of abdominal pregnancy followed by the mesosalpinx and omentum [5]. However, implantation on other abdominal organs such as the spleen, liver, and appendix are also reported. For the diagnosis of primary abdominal pregnancy, Studdiford's criteria need to be fulfilled, these include: normal bilateral fallopian tubes and ovaries, the absence of utero-peritoneal fistula, and pregnancy related exclusively to the peritoneal surface and early enough to eliminate the possibility of secondary implantation following a primary location in the tube [6, 7].

Extra-uterine abdominal pregnancy can also be classified as early abdominal pregnancy when the gestation is less than 20 weeks of amenorrhea and advanced abdominal pregnancy when the gestation is greater than 20 weeks. The majority of the placentas are located near the uterine wall and with a relatively numerous blood supply that are responsible for maintaining foetal development and maturity [8]. In our case that we managed, the deep attachment of the placenta was found to the posterior fundus of the uterus indicating that it was a secondary abdominal pregnancy primary origin is mainly from the tubal ectopic.

Abdominal pregnancy is thought to represent around 1–2% of all ectopic pregnancies with an estimated incidence of 1:8000–10

000 pregnancies. It is a serious and potentially life-threatening condition, mainly due to the risk of massive haemorrhage from a partially or totally separated placenta at any stage of pregnancy [9, 10]. Maternal mortality is around 7times that of other locations of ectopic pregnancy and 90-times more than that of intrauterine pregnancy while perinatal mortality in those undiagnosed is estimated to be is 40–95% globally.

The clinical presentation of the patient with extra uterine abdominal pregnancy are not specific, variable, based on the location and the gestational age at diagnosis and usually resemble the other types of ectopic pregnancies. Consistent stomach pain, nausea, vomiting, severe foetal movements, weight loss, vaginal bleeding, and probing of an abdominal mass separate from the uterus are some of the clinical symptoms. Our patient had suspicious symptoms, including painful fetal movement, abdominal pain, and palpable fetal components, similar to other previous reports of advanced abdominal pregnancy. Main risk factors for this condition for abdominal pregnancy are the same as those for other ectopic pregnancies which include tubal damage, uterine surgery, pelvic inflammatory disease, endometriosis, assisted reproduction techniques, infertility and multiparty.

The clinical presentation of an early extra uterine abdominal pregnancy is similar to presentation of the tubal ectopic pregnancy in the majority of cases, making the diagnosis of an early extra uterine abdominal pregnancy to be difficult. Clinical presentation is non-specific, therefore high index of suspicion is needed to make the diagnosis of an extra uterine abdominal pregnancy. Ultrasound remain as the most used diagnostic tool for diagnosing abdominal pregnancy in obstetric nevertheless, it is limited by many factors including maternal obesity, meteorism and operator ability [11]. Despite advances in obstetric ultrasound diagnosis, MRI is a very useful tool to identify placental implantation site, blood supply, and its relationship with great vessels, bowel or other vital structures that could be affected Ultrasound, especially transvaginal, remains the first-line tool. Despite advances in obstetric ultrasound diagnosis, MRI is a very useful tool to identify placental implantation site, blood supply, and its relationship with great vessels, bowel or other vital structures that could be affected and is not contraindicated when needed [12].

In an advanced gestational age, at which most abdominal pregnancies are diagnosed which is similar to our case, the management becomes complicated and associated with high risk of maternal-fetal morbidity and mortality [13]. Fetal survival is exceptional, since the perinatal mortality reported is as high as more than 90%. There is a debate in literatures regarding the expectant management of abdominal pregnancy, while some authors believe that expectant treatment and waiting until fetal lung maturity is a viable option, others believe that there is a substantial danger of a life-threatening haemorrhage. In this case, expectant treatment was decided with the help of a multidisciplinary team until 34 weeks, with no maternal complications throughout the pregnancy.

Laparotomy and a multidisciplinary team are required in management of an advanced extra uterine abdominal pregnancy. Because most of the abdominal pregnancies frequently implant in major organs or vascular structures, one of the major issues in delivering an abdominal pregnancy will be haemorrhage control and placental management after delivery. There has been a strong debate on management and removal of the placenta, if the placenta is attached by major vessels or critical structures, it should be left in place after delivery, followed by a close follow-up. Attempts to remove the placenta can result in serious life-threatening haemorrhage and even the efforts to control the bleeding may lead to damage of major organs. Leaving the placenta in situ has been associated with increasing risk of secondary haemorrhage, coagulopathy, ileus, peritonitis, necrosis and abscess formation which may necessitate a patient to go into a second-look laparotomy [14]. There is a debate concerning the use of postoperative methotrexate in management of the placenta, some previous studies reported that the use of methotrexate was associated with intraabdominal infection, abscess formation, and increased risk of maternal mortality rate due to sepsis and thromboembolism [15]. Once methotrexate is initiated, it causes the placenta to rapidly degrade and a tremendous amount of necrotic tissue to accumulate within the peritoneal cavity, providing a favourable environment for colonic bacteria to thrive. The rate of placental breakdown is substantially slower in untreated cases, allowing reabsorption to occur in most cases without serious complications. Therefore, placental management must be individualized and assessed at the operating room, should be removed if it is safe to do so and if not possible due abundant vascular invasion to major organs, it is recommended to leave in situ and maintain a close follow-up for involution and early identification of potential complications as this was the option preferred to our case.

4. Conclusion

Expectant management of an extra uterine abdominal pregnancy is possible with a favourable maternal and fetal outcomes, however because of the high risk of life threatening haemorrhage complications it is highly recommended that once the diagnosis is made the patient should be hospitalised with a multidisciplinary close follow-up through her hospital stay. Serial assessment with MRI is needed to establish placental implantation and vascular involvement preoperatively for the proper plan of management.

References

1. Hurt, K. J., Guile, M. W., Bienstock, J. L., Fox, H. E., & Wallach, E. E. (2012). T*he Johns Hopkins manual of gynecology and obstetrics.* Lippincott Williams & Wilkins.
2. Nathan, L., DeCherney, A., Goodwin, T. M., Laufer, N., & Roman, A. (2012). *CURRENT Diagnosis & Treatment Obstetrics & Gynecology.*
3. Hajji, A., Toumi, D., Laakom, O., Cherif, O. et.al. (2020). CASE REPORT – OPEN ACCESS International Journal of Surgery Case Reports Early primary abdominal pregnancy : Diagnosis and management. 303–6.
4. Abdelazim, I. A., AbuFaza, M., Shikanova, S., & Karimova, B. (2021). Diagnostic criteria and treatment modalities of ectopic pregnancies: a literature review. *REPRODUCTIVE*

HEALTH, 13.

5. Silva, P., Vargas, P., Munoz, A., Jofré, M., Briones, P., Riquelme, C., ... & Kusanovic, J. P. (2018). Expectant management of an abdominal pregnancy diagnosed at 18 weeks: a case report. *Obstetrics and Gynecology International Journal, 9*(1), 13-16.
6. Abdelazim, I. A., AbuFaza, M., Shikanova, S., & Karimova, B. (2021). Diagnostic criteria and treatment modalities of ectopic pregnancies: a literature review. *REPRODUCTIVE HEALTH, 13.*
7. Yildizhan, R., Kolusari, A., Adali, F., Adali, E., Kurdoglu, M., Ozgokce, C., & Cim, N. (2009). Primary abdominal ectopic pregnancy: a case report. *Cases Journal, 2,* 1-4.
8. Hymel, J. A., Hughes, D. S., Gehlot, A., Ramseyer, A. M., & Magann, E. F. (2015). Late abdominal pregnancies (≥ 20 weeks gestation): a review from 1965 to 2012. *Gynecologic and Obstetric Investigation, 80*(4), 253-258.
9. Schorge, J. O. (Ed.). (2008). *Williams gynecology.* New York: McGraw-Hill Medical.
10. Silva, P., Vargas, P., Munoz, A., Jofré, M., Briones, P., Riquelme, C., ... & Kusanovic, J. P. (2018). Expectant management of an abdominal pregnancy diagnosed at 18 weeks: a case report. *Obstetrics and Gynecology International Journal, 9*(1), 13-16.
11. Gidiri, M. F., & Kanyenze, M. (2015). Advanced abdominal ectopic pregnancy: lessons from three cases from Zimbabwe and a literature appraisal of diagnostic and management challenges. *Women's Health, 11*(3), 275-279.
12. Mengistu, Z., Getachew, A., & Adefris, M. (2015). Term abdominal pregnancy: a case report. *Journal of Medical Case Reports, 9,* 1-3.
13. Osanyin, G. E., Okunade, K. S., & Oye Adeniran, B. A. (2017). A case report of a successfully managed advanced abdominal pregnancy with favorable fetomaternal outcomes. *Tropical Journal of Obstetrics and Gynaecology, 34*(3), 240-242.
14. Huang, K., Song, L., Wang, L., Gao, Z., Meng, Y., & Lu, Y. (2014). Advanced abdominal pregnancy: an increasingly challenging clinical concern for obstetricians. *International journal of clinical and experimental pathology, 7*(9), 5461.
15. To APG. A practical guide to obstetrics & gynecology.