CASE REPORT

Abdominal ectopic pregnancy: A case report

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ABSTRACT

We presented the case of 20-year-old gravid female who presented in the emergency department with abdominal pain and bleeding per vagina. The gestational age was 17 weeks 3 days. According to previous ultrasonography scan done elsewhere dated 05.07.2021, showed live intra uterine fetus of 11 weeks 5 days gestation in the cornua of left horn of the uterus. Beta HCG level was 4000 IU/L. Ultrasonography findings were suggestive of fetal demise with rupture of one of the rudimentary horn of uterus with an ectopic intra-abdominal pregnancy. Post operative findings correlated with ultrasound findings. **Keywords:** placenta, ectopic, pregnancy, abdominal, ultrasonography

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INTRODUCTION

Ectopic pregnancy is very rarely sited in the abdominal cavity. It is normal for implantation of the fertilized ovum to occur within the uterine cavity. When implantation takes place anywhere outside the uterine cavity it is referred to as an ectopic pregnancy. Abdominal pregnancy is a rare type of ectopic pregnancy where the developing embryo implants and grows within the peritoneal cavity. Abdominal pregnancy can further be classified as being primary or secondary. Primary abdominal pregnancy which is extremely rare occurs when a fertilized ovum implants itself initially on some abdominal organ. Most cases of abdominal pregnancy are secondary in that the ovum first implants in the fallopian tube, ovary or uterus and subsequently escapes through a rupture into the peritoneal cavity.¹There are reported cases of abdominal pregnancy developing to term with delivery of a live foetus through an abdominal incision. There is a significant risk of maternal intraperitoneal haemorrhage with fatal consequences. The overall foetal survival rate remains low.²

An abdominal ectopic pregnancy is a pregnancy that occurs outside of the uterus and instead in the abdominal cavity. Common forms of placental implantation in abdominal pregnancies include attachment on reproductive organs with subsequent rupture into the peritoneal cavity, as well as direct attachment to uterine serosa, omentum, bowel, and mesentery.^{3,4} Abdominal ectopic pregnancies increase the risk of fatal intraperitoneal hemorrhage.⁴ Therefore, it is important to diagnose and effectively manage this rare type of pregnancy in order to reduce morbidity and mortality.

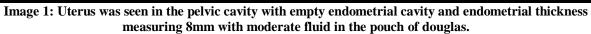
CASE REPORT

A 20-year-old gravid female presented in the emergency department with abdominal pain and bleeding per vagina. The gestational age was 17 weeks 3 days. According to previous ultrasonography scan done elsewhere dated 05.07.2021, showed live intra uterine fetus of 11 weeks 5 days gestation in the cornua of left horn of the uterus. Beta HCG level was 4000 IU/L



IMAGE 1

IMAGE 2





Single non-viable fetus seen in the Abdominal cavity on the left side . Superior to the uterus

The head and spine of the fetus is noted in the abdominal cavity.

Moderate amount of fluid with echoes and bowel loops seen in the abdominal cavity

Image 2: Placental tissue was seen in the umbilical region.

The uterus was seen in the pelvic cavity with no fetus within. The fetus was lying transversely in the umbilical quadrant of the abdominal cavity with its head to the left side. No cardiac activity was appreciated in the study conducted.Ultra Sonography findings were suggestive of a single extra uterine fetus in the abdominal cavity with no cardiac activity and fetal parameters corresponding to 15 weeks, confirming an ectopic abdominal fetus. The patient was immediately referred back to OBGY department for further management with all findings documented. Intraoperatively, bicornuate uterus visualized. Fetus wasidentified in the abdominal cavity. Placenta was attached to left rudimentary horn, then the placenta was removed along with retroplacental clots and then the left rudimentary horn was removed along with the fallopian tube. Ultrasonography findings were suggestive of fetal demise with rupture of one of the rudimentary horn of uterus with an ectopic intraabdominal pregnancy. Post operative findings correlated with ultrasound findings.

DISCUSSION

A high index of suspicion is needed to make a first time diagnosis of abdominal pregnancy.⁵ Diagnosis is missed in one-fourth of reported cases.⁶The reported incidence of abdominal pregnancy varies widely with geographical location ranging between 1: 10,000 deliveries in the USA^{7,8} and 1:654 deliveries in Ibadan-Nigeria.⁹ Multiparity and poor socio-economic status are implicated as epidemiological factors.¹⁰Abdominal pregnancy is a rare type of ectopic pregnancy associated with high mortality rate.¹¹

The estimated incidence of a rupture of the unscarred uterus is 1/8000 to 15,000 deliveries as per World Health Organization (WHO). Timely diagnosis and intervention is important to reduce mortality.¹² Ultrasound examination still remains the modality of choice for diagnosis of an ectopic pregnancy.¹³ Patients who have rudimentary horns have an increased incidence of obstetrics and gynecologic

problems. Such patients should always be screened with 2D and 3D ultrasonography.

A 20-year-old gravid female presented in the emergency department with abdominal pain and bleeding per vagina. The gestational age was 17 weeks 3 days. According to previous ultrasonography scan done elsewhere dated 05.07.2021, showed live intra uterine fetus of 11 weeks 5 days gestation in the cornua of left horn of the uterus. Beta HCG level was 4000 IU/L.

In this study, the uterus was seen in the pelvic cavity with no fetus within. The fetus was lying transversely in the umbilical quadrant of the abdominal cavity with its head to the left side. No cardiac activity was appreciated in the study conducted. Ultra Sonography findings were suggestive of a single extra uterine fetus in the abdominal cavity with no cardiac activity and fetal parameters corresponding to 15 weeks, confirming an ectopic abdominal fetus. The patient was immediately referred back to OBGY department for further management with all findings documented. Placenta was attached to left rudimentary horn, then the placenta was removed along with retroplacental clots and then the left rudimentary horn was removed along with the fallopian tube. The ultrasonography findings were suggestive of fetal demise with rupture of one of the rudimentary horn of uterus with an ectopic intra-abdominal pregnancy. Post operative findings correlated with ultrasound findings.Abdullah L et al¹⁴ presented a case of a 22-year-old shocked patient with acute abdominal pain underwent laparotomy, abdominal pregnancy implanted into the posterior wall of the uterus diagnosis was made, and appropriate follow-up was offered. Acute abdominal pain may be the main symptom of the abdominal pregnancy. The diagnosis was made by direct visualization of the products of conception and pathological study confirmed. The first case of abdominal pregnancy is implanted into the posterior wall of the uterus. Follow-up is recommended until βhuman chorionic gonadotropin levels become undetectable.Okafor I et al15 presented a case of abdominal pregnancy in a 39-year-old female gravida 4, para 0+3. Ultrasonography revealed a viable abdominal pregnancy at 15 weeks gestational age. She was initially managed conservatively. Surgical intervention became necessary at 20 weeks gestational age following Ultrasound detection of foetal demise. The maternal outcome was favourable. Their case was presented to highlight the dilemma associated with diagnosis and management of abdominal pregnancy with a review of literature. Chen Y et al¹⁶ analyzed the clinical characteristics of abdominal pregnancy, and to explore the diagnosis and prognosis of different treatment methods. The median age of 17 patients was 34 years (22-42 years); the median gestational duration was 57 days (from 41 days to 32 weeks). Among all 17 patients, 15 (88.24%) presented with abdominal pain. The implantation sites of the gestational sac included the bladder peritoneal

reflection, anterior wall of the rectum, omentum, serous membrane of the uterus, and inside or on the surface of uterosacral ligament. In all, only 29.41% cases (5/17) were diagnosed before surgery. All 17 patients were treated via surgery. Further, 58.82% (10/17) patients recovered without complications, 29.41% (5/17) developed fever, 5.88% (1/17) underwent reoperation because of intra-abdominal bleeding, and 5.88% (1/17) developed double lower limb venous thrombosis. All 17 patients survived. The preoperative diagnosis rate of abdominal pregnancy was low. Planting sites in the pelvic peritoneum and pelvic organs were more common than the others. Laparoscopic surgery in the first trimester of pregnancy can achieve better therapeutic effects. However, the blood supply of the placenta should be fully evaluated before surgery. When it is expected that attempts to remove the placenta will cause fatal bleeding, the placenta can be left in place, but longterm close follow-up should be paid attention to.¹⁶

CONCLUSION

Ultrasonography findings were suggestive of fetal demise with rupture of one of the rudimentary horn of uterus with an ectopic intra-abdominal pregnancy. Post operative findings correlated with ultrasound findings.

REFERENCES

- 1. Zeck W, Kelters I, Winter R, Lang U, Petru E. Lessons learned from four advanced abdominal pregnancies at an East African Health Center . J. Perinat Med. 2007;35(4):278–281.
- Stanley JH, Horger EO,, Fagan CJ, Andriole JG, Fleischer AC. Sonographic findings in abdominal pregnancy. AJR Am J Roentgenol . 1986;147(5):1043– 1046.
- Agarwal N, OdejinmiF. Early abdominal ectopic pregnancy: challenges, update and review of current management. Obstet Gynecol. 2014;16(3):193–198.
- Okafor I, Ude A, Aderibigbe A, et al.. Abdominal pregnancy—a case report. J West Afr Coll Surg. 2011;1(1):121–130.
- Ayinde OA, Aimakhu CO, Adeyanju OA, Omigbodun AO. Abdominal pregnancy at the University College Hospital, Ibadan : a ten-year review. Afr J. Reprod Health. 2005;9(1):123–127.
- Lamina MA, Akinyemi BO, Fakoya TA, Shorunmu TO, Oladapo OT. Abdominal pregnancy: a cause of failed induction of labour . Niger J Med. 2005;14(2):213–217.
- Stanley JH, Horger EO,, Fagan CJ, Andriole JG, Fleischer AC. Sonographic findings in abdominal pregnancy. AJR Am J Roentgenol . 1986;147(5):1043– 1046.
- Zhang J, Sheng Q. Full-term abdominal pregnancy: a case report and review of literature .Gynecol Obstetrics Invest. 2008;65(2):139–141.
- Sherer DM, Dalloul M, Gorelick C, Kheyman M, Abdelmalek E, Zinn H, Abulafia O. Unusual maternal vasculature in the placenta periphery leading to diagnosis of abdominal pregnancy at 25 weeks' gestation . JOURNAL OF Clinical Ultrasound. 2007;35(5):268–273.

- Sfar E, Kaabar H, Marrakechi O, Zouari F, Chelli M, Kharouf M. Abdominal pregnancy, a rare anatomoclinical entity. 4 case reports . Rev Fr Gynecol Obstet. 1993;88(4):261–265.
- 11. Early diagnosis of spontaneous heterotopic pregnancy successfully treated with laparoscopic surgery. Celia Soares et al., Case Rep, 2020
- 12. Ovarian ectopic pregnancy after in vitro fertilisation treated by laparoscopic excision with ovarian preservation. Kelly Ribeiro et al., Case Rep, 2020
- 13. Spontaneously conceived 17-week heterotopic pregnancy: a challenging and unusual diagnosis. Sara de Oliveira et al., Case Rep, 2021
- Abdullah L, Alsulaiman SS, Hassan M, Ibrahim HS, Alshamali N, Nizami S. Abdominal pregnancy: a case report. Ann Med Surg (Lond). 2023 Feb 7;85(2):302-305.
- Okafor I, Ude A, Aderibigbe A, Amu O, Udeh P, Obianyo N, Ani C. Abdominal pregnancy- a case report. J West Afr Coll Surg. 2011 Jan;1(1):121-30.
- Chen, Y., Peng, P., Li, C. et al. Abdominal pregnancy: a case report and review of 17 cases. Arch GynecolObstet 307, 263–274 (2023).