



Asymptomatic Primary Abdominal Pregnancy in the Second Trimester: A Rare Case Report

S. Donel^{1,2}, Ratu Astuti Dwi Putri^{1,2*}, Heru Maranata Nababan^{1,2} and Maya Savira³

¹Departement of Obstetric and Gynaecology, Arifin Achmad Hospital, Pekanbaru, Indonesia.

²Faculty of Medicine, University of Riau, Diponegoro St. No.1, Pekanbaru, Riau, Indonesia.

³Departement of Microbiology, University of Riau, Diponegoro St. No.1, Pekanbaru, Riau, Indonesia.

Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

Article Information

Editor(s):

(1) Dr. Rajbala Singh, Siddhartha Institute of Pharmacy, India.

Reviewers:

(1) Mutarambirwa Henri Donald, Saint Vincent De Paul Catholic Hospital, Cameroon.

(2) Syarifah Nafisah Syed Ibrahim, Malaysia.

Complete Peer review History: <http://www.sdiarticle4.com/review-history/67842>

Case Report

Received 26 February 2021

Accepted 02 May 2021

Published 19 May 2021

ABSTRACT

Aims: Abdominal pregnancy, especially at the second trimester, is a rare and life-threatening case with a high mortality rate for both mother and fetus [1,2]. An abdominal pregnancy is defined as a pregnancy that occurs in the peritoneal cavity outside the tube, ovary, or intra-ligamentous region, which can occur primarily or secondary. The researcher reported the case of primary abdominal pregnancy [1,3-5].

Presentation Case Report: Patients G4P1A2H1 at 25-26 weeks pregnant without complaint, had an ultrasound examination which showed fetus location in the left hypochondria region, with placenta implantation attached to the abdominal aortic area, this was confirmed by MRI that showed intraabdominal pregnancy. Operative laparotomy in this patient was performed, followed by dissection of placenta attachment to the sigmoid colon and omental mucosa. Bleeding was also found in the uterine fundus without any evidence of the discovery of uteroperitoneal fistulas in intraoperative. The results of histopathological examination showed an appearance of placental tissue with a non-specific chronic inflammatory process from the placenta implantation of the

*Corresponding author: E-mail: dwi.ratu@yahoo.com;

abdominal pregnancy in the posterior fundus.

Conclusion: This case report supports the importance of diagnostic competence of life-threatening conditions, especially in rare cases with less obvious manifestations, in order to reduce maternal and fetal morbidity and mortality.

Keywords: Abdominal pregnancy; primarily; second trimester; rare case.

1. INTRODUCTION

Abdominal pregnancy, especially in the second trimester, is a rare and life-threatening case with a high mortality rate for both mother and fetus. [1,2] An abdominal pregnancy is defined as a pregnancy that occurs in the peritoneal cavity outside the tubes, ovaries, and intra-ligamentous region. [1,3-5] The incidence of abdominal pregnancy is 1.4% of all ectopic pregnancies, and can be found in 1: 10,000 - 1: 30,000 pregnancies [3-7]. The percentage of maternal mortality ranges from 0.5% -18% of all cases and the perinatal mortality rate is 40-95% of all cases, and the possibility of maternal or perinatal mortality can increase if the diagnosis is not immediately confirmed and treated [2,8].

There are primary and secondary abdominal pregnancy [1]. Studdiford's criteria can be used to diagnose a primary abdominal pregnancy, which are located in the peritoneal cavity. Secondary abdominal pregnancy defined as pregnancy originates from the tube or occurs as a result of ectopic pregnancy rupture or tubal abortion [9,10]. Primary abdominal pregnancies are very rare, with the incidence of events unknown [11-14]. Abdominal pregnancies can also be divided into late abdominal pregnancy (after 20 weeks of gestation with alive fetus, or show signs of ever lived and developed in the mother's abdominal cavity) and early abdominal pregnancy (gestational age \leq 20 weeks) [9,10].

Studdiford's criteria, ultrasound examination or postoperative histopathological evidence can be used to diagnose abdominal pregnancy [9-15]. The main therapeutic choice in the management of abdominal pregnancy is surgery. Medication is generally used to minimize potential life-threatening bleeding in the patient [16-20]. The prognosis of an abdominal pregnancy is unfavorable for both the mother and the fetus, especially if the diagnosis decision is late, or if the case is found intraoperatively. The prognosis for the fetus is often very poor, with perinatal mortality varying from 40% to 95% [16-21].

2. PRESENTATION OF CASE

Ms. A, 36 years old with G4P1A2H1 at 25-26 weeks of gestational age was diagnosed with abdominal pregnancy, previous cesarean section history (the youngest child was 11 years old), single living fetus, came to the emergency section of obstetric and gynaecology department of Arifin Achmad Tertiary Hospital, Pekanbaru. Patient came brought a referral letter from Dumaissecondary hospital (subdistrict hospital). During this pregnancy the patient never controlled her pregnancy (antenatal care) to the obstetrician, until finally she came to secondary hospital to meet the obstetrician for the first time because she can't feel her baby movement anymore and ultrasound performed showed extrauterine pregnancy, then referred to a tertiary hospital for complete treatment. The patient had stable vital signs but showed increased blood pressure about 160/90 mmHg. Patient claimed to have history of high blood pressure and routinely consumed methyldopa 2x250 mg per day. The patient has a history of recurrent vaginal discharge since the first pregnancy, which was worsening when the patient is pregnant, but this condition had never been treated, and moderate nausea and vomit but it didn't interfere her to do activities.

An Abdominal examination did not reveal an acute abdomen sign, fundal height was term sized, fetal heart rate was hard to detected and laboratory findings were within normal range. Ultrasound examination (USG) showed suspicious appearance of a late abdominal pregnancy with a complex mass image with hyperechoic density behind the uterus, a placental-like mass with an irregular wall attached to the abdominal aorta (Fig. 1a) and a fetal appearance in the left hypochondria region. USG did not show intrauterine conception (Fig. 1b). FMRI examination was performed to confirm the diagnosis, the result then confirmed an intra-abdominal pregnancy (Fig. 2).

At the time of laparotomy, a dissection was performed on the placenta attachment to the mucosa of the sigmoid colon and omentum (Figs. 3a, 3b), and a 700 gram baby boy was born with Apgar score of 1/1/0 at 1, 3 and 5 minutes. The surgery in collaboration with the surgeon. Bleeding was found in the uterine fundus, ligase cauterized was performed and drain was installed interperitoneally. The patient was then transferred to the ICU for further observation and being followed up closely and patient was discharge with hemodynamically stable.

3. DISCUSSION

The most common symptoms in abdominal pregnancy are abdominal pain, nausea and vomiting. In this report, not found any symptom of abdominal pregnancy like recurrent abdominal pain throughout pregnancy. This makes it increasingly difficult to recognize abdominal pregnancy. The patient never performs an ultrasound examination and suddenly come to obstetrician because she can't feel her baby movement anymore. The clinical manifestations between primary and secondary abdominal pregnancy can be different, although the risk factors for both are the same. In this patient, the possible underlying risk factor is a history of recurrent vaginal discharge which may be accompanied by a history of pelvic inflammatory disease and has a history of recurrent

miscarriage, which also could be a risk factor for ectopic pregnancy [22-24].

An Abdominal examination was found fundal heigh was term sized which is not relevant to her gestational age. Ultrasound examination, especially transvaginal ultrasonography, is the main choice of modality for diagnosing abdominal pregnancy. Experience, competency, clinical manifestations correlation and a high index of suspicion are very important in deciding the diagnosis [9-15,22-24]. The clinical manifestations showed in the patient was not very obvious, thus the obstetrician performed their own assessment, using transabdominal and transvaginal ultrasound. MRI examination was performed to provide additional information in less obvious cases in order to provide more evident image of the extent of placenta implantation attachment in the abdominal and pelvic organs. In this patient, on further inspection of the placenta, there was placenta adhesions to the mucosa of the sigmoid colon and the omentum without any evidence of the discovery of uteroperitoneal fistulas in intraoperative. Fetus was found to be located in the left hypochondria region, hence there was probability that it was indeed a primary abdominal pregnancy, which is a very rare case. Laparotomy is the preferred choice when abdominal pregnancy is diagnosed, in order to get better access for placental exploration and control the bleeding [16-20].

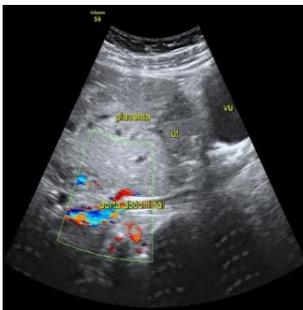


Fig. 1a. Ultrasound showed a placental-like mass with irregular walls attached to the abdominal aorta



Fig. 1b. Ultrasound showed no intrauterine conception exist



Fig. 2. MRI showed no fetus in the uterine cavity. Fetus was visible in the left side of abdominal cavity with the position of the head, back on the left lateral side, and placenta attached to the fundus

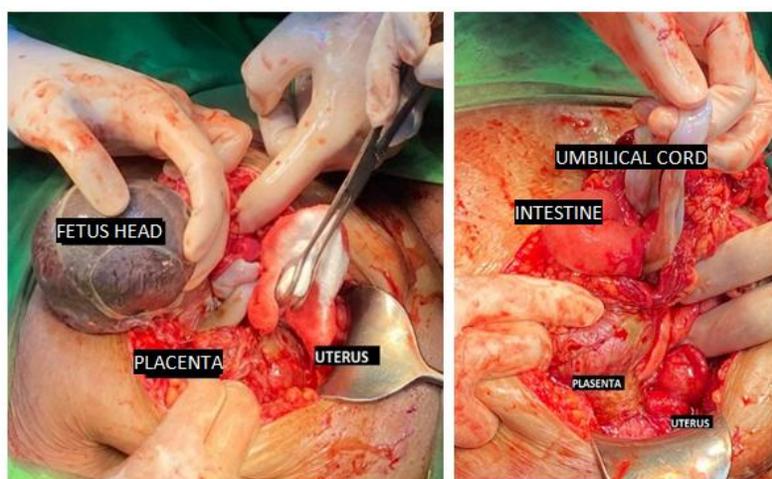


Fig. 3. Dissection of the placenta that is attached to the sigmoid colon and omentum mucosal

4. CONCLUSION

Abdominal pregnancy is a rare case and requires precise competence in diagnose abdominal pregnancy both from clinical manifestations and interpreting imaging findings. In this patient with nonspecific sign and lack of antenatal care make it difficult to confirm the diagnose of abdominal pregnancy. Ultrasound examination is the main diagnostic modality in rare cases such as abdominal pregnancy. The complications that occur can be life threatening mainly due to bleeding caused by placenta implantation.

CONSENT

As per international standard or university standard, patient's consent has been collected and preserved by the authors.

ETHICAL APPROVAL

As per international standard or university standard written ethical approval has been collected and preserved by the author(s).

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

1. Poole A, Haas D, Magann EF. Early abdominal ectopic pregnancies: A systematic review of the literature. *Gynecol Obstet Invest.* 2012;74:249–60.
2. Tucker K, Bhardwaj NR, Clark E, Epsley E. Delayed diagnosis and management of second trimester abdominal pregnancy. *BMJ Case Rep;* 2017. DOI: 10.1136/bcr-2017-221433
3. Atrash HK, Friede A, Hogue CJ. Abdominal pregnancy in the United States: Frequency and maternal mortality. *Obstet Gynecol.* 1987;69(3 Pt 1):333–7.
4. Bouyer J, Coste J, Fernandez H, Pouly JL, Job-Spira N. Sites of ectopic pregnancy: A 10 year population-based study of 1800 cases. *Hum Reprod.* 2002;17(12):3224–30.
5. Yoder N, Tal R, Martin JR. Abdominal ectopic pregnancy after invitro fertilization and single embryo Reprod. Transfer: A case report and systematic review. *Biol. Endocrinol.* 2016;14:69.
6. Krishna D, Damyanti S. Advanced abdominal pregnancy: A diagnostic and management dilemma. *J Gynecol Surg.* 2007;23:69–72.
7. Delke I, Veridiano NP, Tancer ML. Abdominal pregnancy: Review of current management and addition of 10 cases. *Obstet Gynecol.* 1982;60:200–4.
8. Nemat Abdul Rahman Abdul Jabbar, Saquib S, Mohammed Talha WE. Successful Management of Abdominal Pregnancy: Two Case Reports. *Oman Med J.* 2018;33(2):171-175. DOI: 10.5001/omj.2018.32.
9. Studdiford WE. Primary peritoneal pregnancy. *Am J Obstet Gynecol.* 1942;44: 487–91.

10. Worley KC, Hnat MD, Cunningham FG. Advanced extrauterine pregnancy: Diagnostic and therapeutic challenges. *Am J Obstet Gynecol.* 2008;198:297.e1–297.e
11. Hajji A, Toumi D, Laakom O, et al. Early Primary abdominal pregnancy: Diagnosis and management. A case Report. *International Journal of Surgery Case Report.* 2020;73:303-306.
12. Dubwy A, Satodiya M, Garg P, Rani M. Primary abdominal pregnancy: A case Report. *Journal of Clinical and Diagnostic Research.* 2016;10(11):QD04-QD06.
13. Nilesh A, Funlayo O. Early abdominal ectopic pregnancy: Challenges, update and review of current management. *Obstet Gynecol.* 2014;16:193-198.
14. Hailu FG, Yihunie GT, Essa AA, et al. Advanced abdominal pregnancy, with live fetus and severe preeclampsia, case report. *BMC Pregnancy Childbirth.* 2017; 17:243.
DOI: 10.1186/s12884-017-1437-y
15. Allibone GW, Fagan CJ, Porter SC. The sonographic features of intra-abdominal pregnancy. *J. Clin. Ultrasound* 9. 1981; 383-387.
16. Cristalli B, Guichaoua H, Heid M, Iazard V, Levardon M. Grossesse Ectopic Que Abdominal. Limites du traitement coelioscopique. *J. Gynecol Obstet. Biol. Reprod.* 1992;21:751-753.
17. Agha RA, Borrelli MR, Farwana R, Koshy K, Fowler A, Orgill DP. For the SCARE Group, The SCARE 2018 statement: Updating consensus Surgical Case Report (SCARE) guidelines. *Int. J. Surg.* 2018;60: 132-136.
18. Parker VL, Srinivas M. Non-tubal ectopic pregnancy. *Arch Gynecol Obstet.* 2016; 294:19–27.
19. Worley KC, Hnat MD, Cunningham FG. Advanced extrauterine pregnancy: Diagnostic and therapeutic challenges. *Am J Obstet Gynecol.* 2008;198:297.e1–297.e7.
20. Dahab AA, Aburass R, Shawkat W, et al. Full-term extrauterine abdominal pregnancy: A case report. *J Med Case Rep.* 2011;5:531.
21. Siat A, Berrada T, baidada A, Kharbach A. Abdominal pregnancy with a healthy newborn: A new case. *Pan African Medical Journal.* 2019;34.
22. Ticconi C, Capogna, MV, Martelli F, et al. Ectopic pregnancy in women with recurrent miscarriage. *J. Obstet Gynaecol. Res.;* 2018.
DOI: 10.1111/jog.13607
23. Butts S, Sammel M, Hummel A. Risk factors and clinical features of recurrent ectopic pregnancy: A case control study. *American Society for Reproductive Medicine Published by Elsevier Inc.* Printed on acid-free paper in U.S.A. 2003;80(6).
24. Hassan M, Killick S. Is previous aberrant reproductive outcome predictive of subsequently reduced fecundity?. Published by Oxford University Press on behalf of the European Society of Human Reproduction and Embryology. DOI: 10.1093/humrep/deh670

© 2021 Donel et al.; This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Peer-review history:
The peer review history for this paper can be accessed here:
<http://www.sdiarticle4.com/review-history/67842>