

Right abdominal pregnancy with hemorrhagic shock after previous left tubal pregnancy: A case report

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Aloysius Suryawan^{1*}, Theresia Monica Rahardjo^{2*} ,
Erna Suparman^{3*} and Jeffrey Christian Mahardhika^{4*}

Abstract

Abdominal pregnancy is the rarest ectopic pregnancies, with an incidence of 1 per 10,000 live births, and life-threatening because the symptoms are not specific and diagnosis is made after abdominal pain, amenorrhea and vaginal bleeding occur. We present a rare case of abdominal pregnancy in a 31-year-old Indonesian woman with severe abdominal pain within 24 hours before hospital admission, accompanied by nausea, vomiting, dizziness and weakness. She felt the pain increasing since the last 2 weeks and limiting her movement. She has a history of a left tubal pregnancy 5 years ago. Ultrasonography examination revealed an ectopic pregnancy, and she was rushed to the operation room for emergency exploratory laparotomy. An abdominal pregnancy was found, located in the right adnexa with excessive fluid in cavum Douglass and a foetus in around 11–12 weeks of gestation accompanied by free fluid in the subdiaphragmatic, subhepatic and pelvic cavity. The surgery was a successful, four units of whole blood were transfused, and the patient was safely discharged from the hospital. The current concept on management of abdominal pregnancy supports immediate surgical intervention with pregnancy termination, as found in this case, because the patient's condition is hemodynamically unstable indicating hemorrhagic shock correlated with massive hemoperitoneum. A prompt diagnosis and good teamwork in treatment plays an important role for such a life-threatening condition to avoid maternal morbidity and mortality in a case of abdominal pregnancy.

Keywords

Abdominal pregnancy, ectopic pregnancy, abdominal pain, surgery, laparotomy

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Introduction

Abdominal pregnancy is the least common type of ectopic pregnancy, representing approximately 1% of ectopic pregnancies, with an incidence of 1 per 10,000 live births and 1 in 1500 pregnancies. Common clinical symptoms that usually appear are abdominal pain, amenorrhea and vaginal bleeding. However, only 50% of patients present with all three of these symptoms.^{1,2} Therefore, the diagnosis of abdominal pregnancy may be difficult to establish. This is why it can be life-threatening because of late treatment. Laboratory tests usually do not show specific abnormalities. Generally, diagnosis of abdominal pregnancy can only be made after exploratory laparotomy.^{3,4}

Ultrasonography was the main method for early abdominal pregnancy diagnosis, but it usually does not show the relationship between ectopic pregnancy and surrounding

tissues. Magnetic resonance imaging has several advantages in soft-tissue imaging; thus, it is helpful for determining the location of the ectopic pregnancy and determining the

¹Department of Obstetrics and Gynecology, Faculty of Medicine, Maranatha Christian University, Bandung, Indonesia

²Department of Anesthesia and Intensive Care, Faculty of Medicine, Maranatha Christian University, Bandung, Indonesia

³Department of Obstetrics and Gynecology, Prof. Dr. R. D. Kandou Hospital, Faculty of Medicine, Sam Ratulangi University, Manado, Indonesia

⁴Unggul Karsa Medika Teaching Hospital, Bandung, Indonesia

*These authors contributed equally to this work.

Corresponding Author:

Theresia Monica Rahardjo, Department of Anesthesia and Intensive Care, Faculty of Medicine, Maranatha Christian University, Suria Sumantri No. 65, Bandung 40164, West Java, Indonesia.

Email: theresiarahardjo@gmail.com



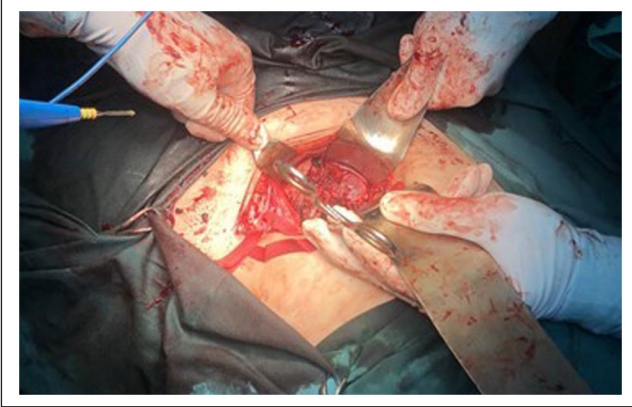


Figure 1. Placenta is located in the posterior part of corpus uteri.

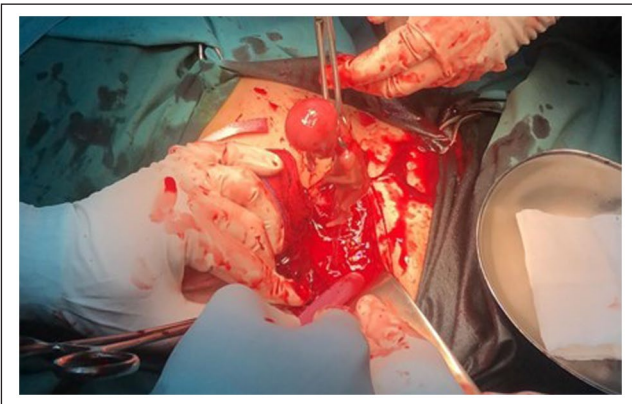


Figure 2. Foetus was taken out from the cavity of Douglas.

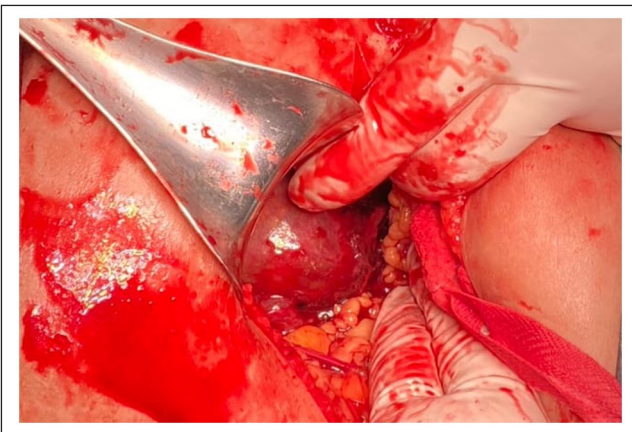


Figure 3. Placenta insertion location at the lateral posterior of the uterus.

relationship of the ectopic pregnancy with the pelvic floor.⁵ Treatment of an abdominal pregnancy depends on gestational age, location of the implantation, placental attachment, and hemodynamic stability of the patient.⁶ Early diagnosis and

treatment of ectopic pregnancy could reduce the incidence of secondary abdominal pregnancy to a certain extent.

Case presentation

A 31-year-old woman with a gestational age of 12–13 weeks was admitted to the emergency department with severe abdominal pain as a major complaint. The pain got worse 24 hours before hospital admission and made her unable to walk. She felt the pain since 2 weeks, and it increased gradually, interfering her daily routine. She also suffered nausea, vomiting, dizziness and weakness. She has a history of vacuum delivery for her first pregnancy, suffered miscarriage in the second pregnancy, and an ectopic pregnancy located at the left fallopian tube in her third pregnancy 5 years ago. Left salpingectomy was performed to remove the previous tubal pregnancy. The patient has no ultrasonography examination in her first trimester because she was reluctant to go to the medical care centre amid the Covid-19 pandemic situation.

Laboratory examination showed her haemoglobin was 8.4 g/dL, haematocrit was 25% and leukocytes count was 21.870/mm³, indicating a bleeding process. Ultrasonography examination revealed the presence of an extra-uterine pregnancy. The patient's hemodynamic condition deteriorated, indicating hemorrhagic shock, and emergency explorative laparotomy was performed immediately. During the procedure, an abdominal pregnancy was discovered located in the right adnexa with excessive fluid in cavum Douglas and a foetus at around 11–12 weeks of gestation accompanied by free fluid in the subdiaphragmatic, subhepatic and pelvic cavity. She had haemoperitoneum with a total blood volume of 2600 mL, and clots were evident inside. The placenta surrounded the posterior corpus uteri and omentum (Figure 1). Some part of placenta was located in the right cornu of the uterus and intestines. The dead foetus was taken out from the right side of flank. The cord was identified, ligated and cut (Figure 2).

After removing the foetus from the abdominal cavity, placenta was removed as much as possible, and the insertion was sutured (Figure 3). There was no active bleeding after the foetus was extracted and the surrounding tissue was cleaned. Bilateral ovaries were normal. Mild erosion and congestion were present over a part of the colon and caecum. Placenta and dissected tissue of posterior uterus with the remaining placenta were sent for histopathological examination. After the surgery, the patient was then shifted to the inpatient ward in satisfactory condition. A total of four units of whole blood were transfused postoperatively. She was discharged from hospital after full recovery.

Discussion

Abdominal pregnancy is a rare form of ectopic pregnancy with increased maternal morbidity and mortality. One study estimated that there were 10.9 cases per 100,000 live births

and 9.2 per 10,000 ectopic pregnancies, but with an outstanding mortality rate of 5.1 per 1000 cases.⁷ There are two types of abdominal pregnancies, primary and secondary abdominal pregnancies. Primary abdominal pregnancy occurs when the gestational sac attaches in the abdominal cavity or peritoneum from the beginning of the conception.⁸ Secondary abdominal pregnancy is a condition when an embryo or foetus develops in the abdominal cavity after the expulsion from the fallopian tube, usually follows early rupture of a tubal pregnancy.⁹ There are times when an abdominal pregnancy was identified at full term of pregnancy, but this is rare.^{1,2} Usually, the foetus dies before term due to incomplete nutritional intake. However, several advanced abdominal pregnancies were reported with foetal intrauterine growth restriction cases due to inadequate blood flow from the placenta to the foetus. Usually, the placenta is attached partially at the uterine wall.^{10,11}

Abdominal pregnancy has the same risk factors as in tubal pregnancy. This patient was using contraception pills, and besides that, she has a history of left tubal pregnancy and salpingectomy surgery. In addition, the recent use of an intrauterine device and pelvic inflammatory disease increases the risk of ectopic pregnancy.¹² Progesterone-only pills are also increases the risk of ectopic pregnancy if they fail to prevent the pregnancy.¹³ It is the same as oral contraception pills and levonorgestrel emergency contraception, which also increases the risk of ectopic pregnancy if they fail to prevent pregnancy.¹⁴

The presence of placental tissue inside the posterior wall of the uterus in this case might be the reason of less peritoneal adhesions. Placental implantation of abdominal pregnancy could be in different places such as uterine external wall, adnexa, broad ligament, bowel and omentum. There was a case that presented with a foetus in the abdomen with its placenta attached to the fallopian tube.¹⁵

Once abdominal pregnancy is diagnosed, laparotomy is usually the treatment of choice to allow better assessment of placental attachment and to control all the bleeding. The current concept on the management of abdominal pregnancy supports immediate surgical intervention with termination of the pregnancy. Abdominal pregnancies can be treated by laparoscopy if the diagnosis is made as early as possible, and the placental implantation site does not involve a vascular area that may lead to uncontrolled intraoperative bleeding.¹⁶ Laparoscopy resulted in shorter operative time, reduced blood loss and fewer days in the hospital than laparotomy.¹⁷ However, if the patient's condition is hemodynamically unstable with ultrasound finding of fluid interpreted as hemoperitoneum, laparotomy is urgent to terminate the pregnancy and control the bleeding as found in this case.^{1,4}

Conclusion

Early and accurate diagnosis is essential in reducing mortality and morbidity of abdominal pregnancy. Emergency surgical treatment should be performed in a hemodynamically

unstable patient. This case report shows time is important in abdominal pregnancy management and could broaden our knowledge in dealing with such patients in our daily practice.

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Author contributions

A.S. treated the patient and provided the case report and discussion sections. T.M.R. reviewed the manuscript and provided files related to ethics and consent. E.S. provided the introduction and discussion sections. J.C.M. provided the discussion section and reviewed the manuscript. All authors read and approved the final version of the manuscript.

Availability of data and materials

The data and materials from this study are available from the corresponding author.

Declaration of conflicting interests

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Our institution does not require ethical approval for case report or case series.

Informed consent

Written informed consent was obtained from the patient(s) for their anonymised information to be published in this article.

ORCID iD

Theresia Monica Rahardjo  <https://orcid.org/0000-0001-9280-023X>

Supplemental Material

Supplemental material for this article is available online.

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