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A case report: ovarian apoplexy and ectopic pregnancy at once



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ABSTRACT

Introduction: Ovarian Apoplexy is the sudden rupture of the ovary that commonly occurs at the site of the corpus luteum cyst, followed by hemoperitoneum. Extremely uncommon but potentially fatal presentation, hemoperitoneum owing to cyst rupture has just a few cases documented in the literature. We report a woman 6 weeks delaying menstrual period, the pregnancy test was positive (second pregnancy). In this article, we aimed to report a rare case of ectopic pregnancy and ovarian apoplexy.

Case Presentation: A 26 Years old woman with a history of abortion in her first pregnancy came to the emergency room with 3 days history of vaginal spotting and mild (2/10) continuous right lower abdominal pain. She was suspected of incomplete abortion from primary health care. She was in 6 weeks delaying her menstrual period which is an uncommon case for incomplete abortion. The pregnancy test was positive (second pregnancy). Surgery was performed after completing the consent. Upon exploration of the abdomen, approximately 500 MLS of intraabdominal blood was identified. The right ovary's ruptured corpus luteum cyst was discovered to be the cause of the intra-abdominal bleeding. The hemorrhage was simply stopped by electrocauterization.

Conclusion: Ovarian Apoplexy concomitantly occurs with an ectopic pregnancy and has not been reported before. Clinical signs and symptoms, especially pain perception of acute abdomen in a person with high pain tolerance, may bias the diagnosis.

Keywords: ovarian apoplexy, ectopic pregnancy, at once.

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INTRODUCTION

Ovarian Apoplexy is the sudden rupture of the ovary that commonly occurs at the site of the corpus luteum cyst, followed by hemoperitoneum. The Corpus luteum provides progesterone to prepare and evolve the pregnancy. It will disband several days after ovulation if there is no conception. If fertilization does place, at around 8 to 10 weeks of gestation, the corpus luteum involutes, and the placenta continues to produce progesterone for the remainder of the pregnancy. The luteal phase of the ovary's increased vascularity may make the cyst more likely to rupture, leading to an acute abdomen and hemoperitoneum. Extremely uncommon but potentially fatal presentation, hemoperitoneum owing to cyst rupture has just a few cases documented in the literature. Acute abdominal pain must always be evaluated quickly and accurately due to the possibility of urgent surgical intervention.¹

We reported a woman 6 weeks delaying menstrual period, the pregnancy test was positive (second pregnancy). The patient presented with no abdominal pain and a pelvic exam was performed with mild pain in the right lower pelvic. It may be because the patient has a high tolerance for pain. The patient was diagnosed with pelvic ultrasound as having a concomitant tubal pregnancy. The major differential diagnosis of ovarian apoplexy in reproductive age women is ectopic pregnancy, but there are no reported cases it occurs concomitantly with ovarian apoplexy.² This could possibly be the first such report. In this article, we aimed to report a rare case of ectopic pregnancy and ovarian apoplexy.

CASE REPORT

A 26 Years old woman with a history of abortion in her first pregnancy came to the emergency room with 3 days history of vaginal spotting and mild (2/10) continuous right lower abdominal pain. She was

suspected of incomplete abortion from primary health care. She was in 6 weeks delaying her menstrual period which is an uncommon case for incomplete abortion. The pregnancy test was positive (second pregnancy).

Physical exam within normal limit with no hypovolemic sign. Her pain score was 2 from 10. She was annoyed by the vaginal spotting rather than the pain. No lower abdominal tenderness. A pelvic exam was performed with mild pain in the right lower pelvic. Pelvic ultrasound was performed and found the right adnexal complex mass with free fluid was filling the Douglas pouch. Her laboratory result was also normal.

Surgery was performed after completed the consent. Upon examining the abdomen, approximately 500 MLS of intraabdominal blood was identified. The right ovary's ruptured corpus luteum cyst was discovered to be the cause of the intra-abdominal bleeding. The hemorrhage was



Figure 1. Pelvic ultrasound was performed and found right adnexal complex mass with free fluid was filling the Douglas pouch.



Figure 2. Approximately 500 mL of intraabdominal blood was identified during abdominal exploration.

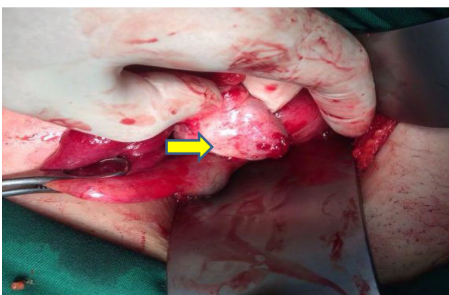


Figure 3. A ruptured corpus luteum cyst was identified in the right ovary and was found to be the source of the intra-abdominal hemorrhage.

simply stopped by electrocauterization. There was an unruptured pars isthmic right fallopian tube pregnancy and also no blood spilled from the tube. The tube pregnancy was removed by total salpingectomy procedure because it located at the pars isthmic fallopian tube. Exploring the right ovarian, there was a rupture of ovarian edge with active bleeding. Left tube is patent. Left ovarian

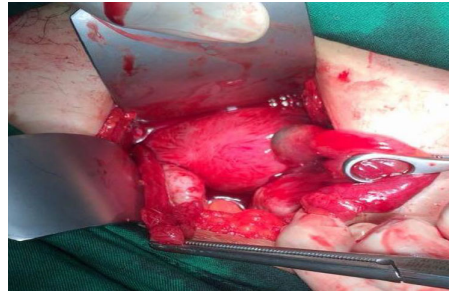


Figure 4. An unruptured right fallopian tube pregnancy and also no blood spilled from the tube.

is normal.

The patient was discharged 48 hours after surgery with no complications. During surgery recovery, she experienced no pain in her surgery wound in standard analgetic (Paracetamol).

DISCUSSION

Ovarian apoplexy is a sudden break of ovarian tissue, commonly at the site of the cyst, accompanied by hemorrhage in the peritoneal cavity and acute pain. Ovarian apoplexy is rare. Among women who are operated on for internal bleeding, ovarian rupture is found in 0.5-3% of cases. Patients may present a wide range of clinical signs, from no signs to severe peritoneal irritation which can be confused with other differential diagnoses such as interrupted ectopic pregnancy and acute appendicitis. Patients with a high tolerance of pain may have no clinical signs of acute abdomen.³

To distinguish between ruptured ectopic pregnancy and ruptured corpus luteum cyst, which may present similarly, a pregnancy test is required. Delay in the menstrual cycle may be linked to a persistent corpus luteum. The presence of an intrauterine pregnancy may be indicated by the occurrence of a corpus luteum rupture. Therefore, even if a pregnancy test is positive, a ruptured corpus luteum cyst should be taken into account.⁴

The initial imaging technique to diagnose apoplexy of the ovary is pelvic ultrasound imaging. It may show a complicated cyst with free hypoechoic fluid in the peritoneal cavity and an echogenic rim encircling the cystic component in the adnexal region (hemoperitoneum). In the pelvis, focal collections of increased

echogenicity, such as clots of blood, may be present in the free hypoechoic fluid. The wall may be visible using Doppler USS.⁵

If the vital sign is unstable, surgical intervention was a significant part in treating ovarian apoplexy. However, if the goal is to preserve ovarian function while also removing the cause of bleeding, the condition can now be controlled with a cautious approach. When a patient's hemodynamics are stable (systolic blood pressure is greater than 90 mmHg) and their hemoglobin levels remain stable over the course of four to six hours of monitoring, the conservative approach is the first course of action. When vital signs are unstable, the patient receives surgical care.¹⁻⁵

The threshold for pain is the lowest intensity at which a person starts to feel discomfort from a stimulus. The highest amount of pain that a person can withstand is known as pain tolerance. An American Pain Society study found that substantial variations in post-operative pain are caused by variations in the biological, psychological, and social makeup of the patient. A New Zealand study discovered that cultural differences affected how people perceived pain. A high pain threshold may make a patient less sensitive to pain or less likely to pay attention to their body's warning signs of illness. With hemoperitoneum, which should be able to induce abrupt and severe pain due to acute abdominal manifestations in a normal person, the patient in this circumstance has a high pain tolerance (2/10).¹⁻⁵

Ectopic pregnancy is characterized as a pregnancy that develops outside the uterus. One percent of fertilized eggs implant externally into the uterus. The fallopian tube is the most typical location for ectopic pregnancy. 4.5 percent of EP cases are extra-tubal, while 75% of EP cases are ampullary. Through tubal wall erosion, hemorrhage, and shock in the first trimester, tubal ectopic frequently manifests as symptoms. Ectopic pregnancy in the first trimester is diagnosed early enough to prevent rupture and potential mortality and morbidity. Ectopic pregnancy in this patient was discovered at six weeks gestation. The ectopic pregnancy was discovered in the right fallopian tube

after surgery and did not experience bleeding or rupture. When the right ovary was examined, the ovarian edge had ruptured and was actively bleeding.¹⁻⁵

CONCLUSION

Ovarian Apoplexy concomitantly occurs with an ectopic pregnancy and has not been reported before. Clinical signs and symptoms, especially pain perception of acute abdomen in a person with high pain tolerance, may bias the diagnosis. Massive hemoperitoneum resulting from an ovarian apoplexy is potentially life-threatening if it is not diagnosed and treated with undergoes surgical treatment emergently.

CONFLICT OF INTEREST

The author declared no conflict of interest in this article.

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ETHICAL CONSIDERATION

This study already got patient consent for publication.

AUTHOR CONTRIBUTION

All authors contributed equally to this study.

REFERENCES

1. Belsky JB, Nagarwala JF, Tokarski GF. Massive hemoperitoneum from a ruptured corpus luteum cyst masquerading as biliary colic. *Int J Case Reports Images*. 2015;6(3):168. Available from: <http://dx.doi.org/10.5348/ijcri-201531-cr-10492>
2. Gundabattula SR, Resapu P, Surampudi K, Surapaneni T, De Padua M. Ovarian apoplexy resulting from ruptured heterotopic pregnancy following intrauterine insemination. *J Obstet Gynaecol Res*. 2017;43(7):1222–6. Available from: <http://dx.doi.org/10.1111/jog.13346>
3. Fiaschetti V, Ricci A, Scarano AL, Liberto V, Citraro D, Arduini S, et al. Hemoperitoneum from corpus luteal cyst rupture: a practical approach in emergency room. *Case Rep Emerg Med*. 2014/06/01. 2014;2014:252657. Available from: <https://pubmed.ncbi.nlm.nih.gov/24987535>
4. Bartley EJ, Fillingim RB. Sex differences in pain: a brief review of clinical and experimental findings. *Br J Anaesth*. 2013;111(1):52–8. Available from: <https://pubmed.ncbi.nlm.nih.gov/23794645>
5. K. M. H, N. S, N. N. Incidence and risk factors associated with ectopic pregnancy: a prospective study. *Int J Reprod Contraception, Obstet Gynecol*. 2021;10(2):703. Available from: <http://dx.doi.org/10.18203/2320-1770.ijrcog20210007>



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