



Ultrasound Diagnosis of Ovarian Apoplexy in Patients with Severe Aplastic Anemia

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Abstract: Ovarian apoplexy is a sudden hemorrhage into the parenchyma of the ovary and at the same time into the abdominal cavity due to the rupture of one or more vessels that supply food. The disease often develops in young women (20-35 years). Ovarian apoplexy is a gynecological emergency. If you do not seek specialized help in time, profuse bleeding may develop, threatening the patient with hemorrhagic shock or even death.

Keywords: gynecological pathology, ovarian apoplexy, ultrasound, aplastic anemia, special endoscopic device.

Pathology occupies 1.5-3% of the structure of general gynecological pathology. The classification of the disease is based on an assessment of the patient's condition and the amount of blood loss. The following degrees of severity of ovarian apoplexy are distinguished:

- ✓ mild, when blood loss does not exceed 150 ml;
- ✓ medium - 150-500 ml;
- ✓ heavy - more than 500 ml.

Spontaneous bleeding into the parenchyma of the ovary is a medical problem that a woman cannot help but notice. The underlying symptom in the development of apoplexy is sudden acute pain in the lower abdomen, which is associated with a rupture of the vessel. Discomfort arises from the affected ovary. With massive intra-abdominal bleeding, pain may spread to the entire surface of the abdomen.

In addition to pain, the following symptoms are present:

- ✓ cold sweat;
- ✓ dizziness, impaired consciousness up to its loss;
- ✓ pallor of the skin;
- ✓ bloating, its tension and soreness when touched;
- ✓ nausea and urge to vomit;

- ✓ an increase in heart rate against the background of a moderate or strong decrease in blood pressure. The severity of these changes directly depends on the degree of blood loss.

Sometimes women feel a pulling pain or discomfort in the lower abdomen even before the vessel ruptures directly. This may be due to ovarian edema and a number of functional changes preceding apoplexy.

If these signs appear, you should immediately seek specialized help. Intra-abdominal bleeding that occurs after a rupture of a vessel can cause serious complications.

The problem of ovarian apoplexy remains relevant to the present due to a decrease in the age limit of the disease and a steady upward trend in the frequency of this pathology [1; 2; 4].

Ovarian apoplexy can be severe and even life-threatening, and 40% of patients requires emergency surgery.

Ovarian apoplexy cannot be attributed to rare diseases - among intra-abdominal bleeding of gynecological origin, it belongs to second place after an ectopic pregnancy and the frequency of this pathology among gynecological patients admitted to the hospital is from 0.3 to 5% [1; 3; 4; 5].

The disposing factors include the transferred inflammatory processes localized in the small pelvis, which led to sclerotic changes in the ovarian tissue and blood vessels, to congestive hyperemia and varicose veins. The role of endocrine factors is not excluded. Bleeding from the ovary can be promoted by blood disorders that interfere with blood clotting [4].

Diagnosis of ovarian apoplexy in most cases is not particularly difficult for an experienced gynecologist. Based on characteristic complaints, the doctor may suspect this problem's presence. To confirm the diagnosis, a gynecological examination is performed, during which the condition of the uterine appendages and the reaction of the posterior fornix are assessed, which indirectly allows one to judge the degree of blood loss. Palpation of the abdomen reveals the tension of the muscles of the press, which indicates the involvement of the peritoneum due to hemorrhage.

An ultrasound is performed to detect free fluid (blood) in the abdominal cavity, and the abdominal cavity is punctured through the posterior fornix. In difficult clinical cases, laparoscopy is indicated, which is the "gold" standard for diagnosing ovarian apoplexy. The intervention allows in 98% of cases to accurately identify the affected vessel and conduct a radical and effective treatment. During laparoscopy, the gynecologist uses a special endoscopic device and can visually assess the condition of the tissues of the pelvic organs in real time.

Aplastic anemia is characterized by impaired hematopoietic function of the bone marrow. This rare, serious disease develops when the bone marrow does not produce enough red blood cells, white blood cells, or platelets. As a result, the body does not have enough blood to function normally. Aplastic anemia can develop at any age - the disease appears suddenly or gradually progresses over time.

In most cases, the exact cause of the disease remains unknown. However, there are a number of factors that can trigger an autoimmune attack on the bone marrow, leading to the development of aplastic anemia.

Among them:

- Chemotherapy or high-dose radiation for oncological diseases;
- Contact with toxic chemicals;
- Some prescription drugs, such as chloramphenicol for bacterial infections, and gold compounds used for rheumatoid arthritis
- Certain autoimmune diseases, serious infections, and blood disorders;
- Viral infections such as hepatitis, Epstein-Barr virus, cytomegalovirus, parvovirus B19 and HIV;
- Pregnancy (very rare);

- Paroxysmal nocturnal hemoglobinuria is a rare disease that is characterized by too rapid destruction of red blood cells;
 - Fanconi anemia is a rare genetic disorder.
1. Transabdominal ultrasound –the method of differential diagnosis of acute surgical diseases of the abdominal organs and such acute gynecological diseases as torsion of the cyst leg, acute purulent inflammatory diseases of the uterine appendages with the formation of tubo-ovarian tumors and internal bleeding in a volume of more than 100 ml.
 2. Transvaginal ultrasound is the second method of differential diagnosis, the scope of which is limited to the pelvic cavity, but it allows to differentiate a short-term uterine pregnancy and an ectopic pregnancy (by the fact of the localization of the fetal egg with the presence of an embryo and its heartbeat), a painful form of ovarian apoplexy, a hemorrhagic form of apoplexy with the presence of blood clots inside the ovarian cyst and in the abdominal cavity, the volume of intra-abdominal bleeding is from 20 ml to 100 ml, but it does not allow to reliably determine the volume of blood loss of more than 100 ml and the fact of ongoing bleeding, as well as inflammatory changes in the appendix and uterine appendages if they are accompanied by the formation bulk organic structures.

References:

1. Айламазян Э.К. Неотложная помощь при экстренных состояниях в гинекологии. - Н.Новгород: Издво НГМА, 1997. – 348 с.
2. Гаспаров А.С. Экстренная помощь в гинекологии. Органосохраняющие операции. - М.: 2000. – 221 с.
3. Гаспаров А.С. и др. Оптимизация тактики ведения больных с острыми гинекологическими заболеваниями // Лапароскопия и гистероскопия в гинекологии и акушерстве. - М.: Пантори, 2002. — С. 200–224.
4. Кулаков В.И. Ургентная гинекология: новый взгляд // Журнал акуш. и женских болезней. — 2001. — Вып. 3., Т.1. — С.15–22.
5. Серов В.Н. Консервативные методы ведения больных с кистозными образованиями яичников // Вестник Росс. Ассоц. акуш. и гинекол. — 1997. — № 1. — С. 13–16.
6. Стрижаков А.Н. Современные подходы к диагностике и тактике ведения больных с опухолями и опухолевидными образованиями яичников // Акуш. и гинек. — 1995. — № 4. — С. 15–18.
7. Ellamonov, S. N., & Nasyrova, Z. A. (2021). Features of the Course of Hypertension among Patients with Type 2 Diabetes Mellitus. *Central Asian Journal of Medical and Natural Science*, 2(4), 11-16. <https://doi.org/10.47494/cajms.v2i4.235>
8. Ellamonov S., Tashkenbaeva E., & Abdieva G. (2022). ОСОБЕННОСТИ КЛИНИЧЕСКОГО ТЕЧЕНИЯ АРТЕРИАЛЬНОЙ ГИПЕРТЕНЗИИ У ПАЦИЕНТОВ С САХАРНЫМ ДИАБЕТОМ 2 ТИПА. *Science and innovation*, 1 (D7), 56-61. doi: 10.5281/zenodo.7219821
9. Ruziboeva, O. N., Abdiev, K. M., Madasheva, A. G., & Mamatkulova, F. K. (2021). Modern Methods Of Treatment Of Hemostasis Disorders In Patients With Rheumatoid Arthritis. *Ученый XXI века*, 8.
10. Мадашева, А. Г., & Махмудова, А. Д. (2021). Биохимические показатели у больных гемофилией с мышечными патологиями до и после лечения. *Форум молодых ученых*, (4 (56)), 233-238.
11. Gazkhanovna, M. A., Makhmatovich, A. K., & Utkirovich, D. U. (2022). Clinical efficacy of extracorporeal and intravascular hemocorrection methods in psoriasis. *ACADEMICIA: An International Multidisciplinary Research Journal*, 12(2), 313-318.

12. Мадашева, А. Г. (2022). Коррекция диффузной алопеции при железодефицитной анемии. *Science and Education*, 3(12), 231-236.
13. Махмудова, А. Д., Жураева, Н. Т., & Мадашева, А. Г. (2022). НАСЛЕДСТВЕННЫЙ ДЕФИЦИТ ФАКТОРА СВЕРТЫВАНИЯ КРОВИ X-БОЛЕЗНЬ СТЮАРТА-ПРАУЭРА. *Биология*, (4), 137.
14. Абдиев, К., Махронов, Л., Мадашева, А., & Маматкулова, Ф. (2021). Business games in teaching hematology. *Общество и инновации*, 2(6), 208-214.