

**MINISTRY OF HEALTH PROTECTION OF UKRAINE
ODESSA NATIONAL MEDICAL UNIVERSITY**

Faculty of dentistry
Department of obstetrics and gynecology



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**METHODOLOGICAL DEVELOPMENT FOR A LECTURE ON THE
DISCIPLINE**

Faculty of Dentistry, course IV
Academic discipline "Obstetrics and gynaecology"
Lecture №2. Topic: "Emergency conditions in obstetrics and gynaecology (pre-eclampsia, eclampsia, "acute" abdomen in gynaecology)"

Approved:

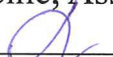
At the meeting of the Department of Obstetrics and Gynecology

Odesa National Medical University

Protocol №1 of "28" August 2023

Head of the Department _____  _____ Igor Gladchuk

Developers:

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Lecture 2

Topic: "Emergency conditions in obstetrics and gynecology (pre-eclampsia, eclampsia, "acute" abdomen in gynecology)"

Aims: The lecture material is aimed at familiarizing higher education students with the occurrence of emergency conditions in obstetrics and gynecology and the changes in the body that they can lead to. Hypertensive disorders during pregnancy (pre-eclampsia, eclampsia) remain one of the most pressing problems of modern obstetrics, largely determining the structure of maternal and perinatal mortality.

Acquire knowledge of diagnosis and treatment of ectopic pregnancy. To learn the features of the course of diseases that cause "acute abdomen" in gynecology, depending on the classification of disease forms.

Basic concepts: Early gestosis: classification, clinic, diagnosis, treatment. Hypertensive disorders during pregnancy. Pre-eclampsia: pathogenesis, classification, diagnosis, clinic, treatment. Eclampsia: clinic, diagnosis, complications, emergency care.

Ectopic pregnancy, ovarian apoplexy. Classification, clinic, diagnosis, treatment.

Plan and organizational structure of the lecture:

1. Definition, risk factors and incidence of hypertensive disorders in pregnancy.
2. Diagnosis of pre-eclampsia, eclampsia.
3. Management of pregnant women with pre-eclampsia of varying severity, eclampsia.
4. Pathological processes leading to the development of ectopic pregnancy.
5. Diagnostic criteria for ectopic pregnancy.
6. Emergency care for ectopic pregnancy

Final stage

Summary of the lecture, general conclusions.

Answers to possible questions

Tasks for self-preparation of students

General material and methodological support for the lecture:

Professional algorithms, structural and logical diagrams, tables, models, videos, results of laboratory and instrumental studies, situational tasks, patients, medical histories.

Content of the lecture:

Pregnancy gestosis is a pathological condition that occurs in connection with pregnancy. The fetal egg is considered to be the factor in the development of gestosis. In domestic obstetrics, it is customary to distinguish between early and late gestosis.

In our country, there is different terminology for this pathology. The term late gestosis can be considered outdated; the modern terms are hypertensive disorders in pregnancy (pre-eclampsia, eclampsia).

A situation in which a fertilized egg is grafted and develops outside the ectopic cavity. In most cases, this happens in the fallopian tubes, sometimes in the ovaries or in the abdominal cavity - cases of fetal development outside the uterine cavity are called ectopic pregnancy. Depending on the location of the implantation of the ovum, ectopic pregnancy is divided into tubal, ovarian, in the rudimentary horn of the uterus and abdominal.

Etiopathogenesis of pre-eclampsia

Among the causes of pre-eclampsia, especially severe forms, the leading place belongs to extragenital pathology, autoimmune disorders, and endocrine diseases.

A significant role in the origin of pre-eclampsia belongs to:

1. Insufficiency of the uterine spiral arterioles, which causes impaired placental circulation;
2. Vascular endothelial dysfunction associated with autoimmune disorders caused by pregnancy.

Changes in organs characteristic of pre-eclampsia:

1. Cardiovascular system: generalized vasospasm, increased peripheral vascular resistance, hypovolemia.
2. Hematological changes: platelet activation accompanied by consumption coagulopathy, decreased plasma volume, increased blood viscosity, hemoconcentration.
3. Kidneys: proteinuria, decreased glomerular filtration rate, decreased uric acid excretion.
4. Liver: periportal necrosis, subcapsular hematoma.
5. CNS: cerebral edema, intracranial hemorrhage.

There is a severe clinical form of gestosis - HELLP syndrome.

Etiology and pathogenesis of ectopic pregnancy

Implantation of the ovum outside the uterine cavity occurs as a result of a violation of the transport function of the fallopian tubes, changes in the properties of the ovum itself.

Tubal dysfunction is associated with

- inflammatory processes of any etiology;
- hormonal status of the body;
- surgical intervention on the tubes.

Clinical manifestations of hypertensive disorders

The classical triad of gestational symptoms (edema, proteinuria, hypertension) described in 1913 by the German obstetrician Hagemeyer. Headache, visual disturbances, pain in the epigastrium and right hypochondrium, which are clinical manifestations of severe pre-eclampsia.

Diagnosis

The diagnosis of pre-eclampsia is justified at more than 20 weeks of gestation in the presence of blood pressure greater than 140/90 mm Hg or in the case of a 15% increase in diastolic blood pressure from the baseline in the first trimester of pregnancy with proteinuria (protein in the daily urine greater than 0.3 g/l) and generalized edema (weight gain of more than 900.0 g per week or 3 kg per month).

The diagnosis of pre-eclampsia is made in the presence of hypertension in combination with proteinuria or generalized edema, or in the presence of all three signs of consumption coagulopathy, decreased plasma volume, increased blood viscosity, and hemoconcentration.

Thrombocytopenia and hemolysis occur as a result of endothelial damage in altered vessels. If this vicious circle of endothelial damage and intravascular activation of the coagulation system is not interrupted, DIC with fatal bleeding develops within a few hours.

The diagnosis of pre-eclampsia is made in the presence of hypertension in combination with proteinuria or generalized edema, or in the presence of all three signs (Table 1)

Table 1.

Diagnostic criteria for the severity of pre-eclampsia/eclampsia.	Diastolic ABP	Proteinuria g/day	Other sings
Gestational hypertension or mild pre-eclampsia	90-99	<0,3	

Moderate pre-eclampsia	100-109	0,3-5,0	Swelling on the face, hands Sometimes a headache
Severe pre-eclampsia	>110	>5	Generalized, significant swelling Headache Visual disturbance Pain in the epigastrium and/or right hypochondrium Hyperreflexia Oliguria (< 500 ml/day) Thrombocytopenia
Eclampsia	>90	>3	Seizure (one or more)

Note. The presence of at least one of the criteria for more severe pre-eclampsia in a pregnant woman is the basis for the corresponding diagnosis.

At present, there are "pure" and "combined" forms of PPH. Combined gestosis develops against the background of extragenital diseases.

For the combined forms of late gestosis, the diagnosis of gestosis is made depending on the manifestations and severity, and then the phrase "against the background of extragenital pathology" is added.

Only diastolic blood pressure is used as a criterion for the severity of hypertension in pregnant women, indications for starting antihypertensive treatment and assessing its effectiveness.

Additional clinical and laboratory criteria should also be determined for the diagnosis of pre-eclampsia (Table 2).

Table 2

Additional clinic-laboratory criteria of pre-eclampsia	Mild pre-eclampsia	Pre-eclampsia moderate severity	Severe pre-eclampsia
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Uric acid, mmmol/l	<0,35	>0,35-0,45	>0,45
Urea, mmmol/l	<4,5	4,5-8,0	>8
Creatinine, μmol/l	<75	75-120	>120 or more
Platelets-10 ⁹ /l	>150	80-150	<80

To monitor the condition of pregnant women at risk of developing pre-eclampsia, screening tests (body weight control, blood pressure control, platelet count, urine protein test, urine bacterioscopy) should be performed once every 3 weeks in the first half of pregnancy and once every 2 weeks from 20 to 28 weeks and weekly after 28 weeks of pregnancy.

Treatment of pre-eclampsia

Treatment depends on the condition of the pregnant woman, blood pressure and proteinuria parameters.

Mild pre-eclampsia

If a pregnant woman's condition meets the criteria for mild pre-eclampsia at up to 37 weeks' gestation, she can be monitored in a day-care hospital. The patient is trained to independently monitor the main indicators of pre-eclampsia: blood pressure measurement, fluid balance and edema monitoring, and fetal movements.

Laboratory tests are performed: general urinalysis, daily proteinuria, creatinine and plasma urea, hemoglobin, hematocrit, platelet count, cholangiogram, ALT and AST, fetal status (non-stress test if possible). No drug therapy is prescribed. Fluid and salt intake is not restricted.

Indications for hospitalization

At least one sign of moderate pre-eclampsia; fetal distress. In case of a woman's stable condition within the criteria for mild pre-eclampsia, the tactics of pregnancy management are wait-and-see. Labor is managed according to the obstetric situation.

Pre-eclampsia of moderate severity

Planned hospitalization of a pregnant woman

Initial laboratory examination: complete blood count, hematocrit, platelet count, cholangiogram, ALT and AST, blood group and Rh factor (if accurate information is not available), general urinalysis, determination of daily proteinuria, creatinine, urea, plasma uric acid, electrolytes (sodium and potassium), assessment of the fetus' condition.

Restraint regime: semi-bed rest, limitation of physical and mental stress.

Rational nutrition: food with a high protein content, **without salt and water restrictions**, consumption of foods that do not cause thirst.

A complex of vitamins and microelements for pregnant women, if necessary, iron supplements. In case of diastolic blood pressure >100 mm Hg, antihypertensive drugs (methyldopa 0.25-0.5 g 3-4 times a day, maximum dose - 3 g per day; if necessary, nifedipine 10 mg 2-3 times a day, maximum daily dose - 100 mg) are prescribed.

During pregnancy up to 34 weeks, corticosteroids are prescribed for the prevention of respiratory distress syndrome (RDS) - dexamethasone 6 mg after 12 hours, four times within 2 days.

The study is conducted with the established frequency of **dynamic monitoring of indicators:**

- blood pressure monitoring - every 6 hours on the first day, then twice a day;
- auscultation of the fetal heartbeat every 8 hours;
- urine analysis - daily;
- daily proteinuria - daily;
- hemoglobin, hematocrit, cholangiogram, platelet count, ALT and AST, creatinine, urea - every three days;
- daily monitoring of the fetal condition.

With the progression of pre-eclampsia, preparations for delivery are initiated:
Delivery.

The method of delivery at any stage of gestation is determined by the readiness of the birth canal and the condition of the fetus. If the preparation of the birth canal with prostaglandins is ineffective, a caesarean section is performed. If the cervix is sufficiently mature, labor induction is performed and delivery is performed through the natural birth canal.

The transition to the management of a pregnant woman according to the algorithm of severe pre-eclampsia is carried out in cases of increase of at least one of the following signs

- diastolic blood pressure >110 mm Hg
- headache
- visual impairment;
- pain in the epigastric region or right hypochondrium;
- signs of hepatic insufficiency;
- oliguria (< 25 ml/h);

- thrombocytopenia ($< 100-109/L$);
- signs of diesel engine syndrome;
- increased ALT and AST activity.

Severe pre-eclampsia

A pregnant woman is admitted to the anesthesiology and intensive care unit of a level III hospital to assess the degree of pregnancy risk for mother and fetus and to choose a method of delivery within 24 hours. An individual ward is allocated with intensive round-the-clock medical supervision. Immediate consultations with a therapist, neurologist, and ophthalmologist.

A peripheral vein is catheterized for long-term infusion therapy, a central vein is catheterized to control central blood pressure, and a bladder is catheterized to control hourly diuresis. If indicated, trans nasal gastric catheterization.

Initial laboratory examination: complete blood count, hematocrit, platelet count, cholangiogram, ALT and AST; blood group and Rh factor (if absent); complete urine analysis, determination of proteinuria, creatinine, urea, total protein, bilirubin and its fractions, electrolytes.

Careful dynamic observation:

- blood pressure monitoring - every hour;
- urine analysis - every 4 hours;
- control of hourly diuresis (bladder catheterization with a Phalen catheter);
- hemoglobin, hematocrit, platelet count, functional liver tests, plasma creatinine - daily;
- Fetal monitoring.

Treatment. Restraint (strict bed rest). In pregnancy up to 34 weeks - corticosteroids for the prevention of RDS - dexamethasone 6 mg after 12 hours, four times, for 2 days.

Active management tactics with delivery within 24 hours of diagnosis, regardless of gestational age.

Antihypertensive therapy.

Treatment of arterial hypertension is not pathogenic, but is necessary for the mother and fetus. BP lowering is aimed at preventing hypertensive encephalopathy and cerebral hemorrhage. It is necessary to strive to bring blood pressure to a safe level (150/90-160/100 mm Hg, not lower!), which ensures the preservation of adequate cerebral and placental blood flow. A rapid and sharp decrease in blood pressure can cause a deterioration in the condition of the mother and fetus. Antihypertensive therapy is performed when the diastolic pressure is > 100 mm Hg. It has been proven that drug antihypertensive therapy does not should be initiated if the blood pressure is $< 150/100$ mm Hg.

Continuous antihypertensive therapy can reduce the incidence of hypertension progression (development of severe hypertension) and increase the severity of

pre-eclampsia, but cannot prevent pre-eclampsia. Continuous antihypertensive therapy does not improve the effects of pregnancy on the fetus and even leads to an increase in the incidence of low birth weight and low birth weight for gestational age. In general, lowering blood pressure through drug therapy can improve the outcome of pregnancy for the mother but not for the fetus.

Diuretics should be avoided, especially in cases of pre-eclampsia (except for pulmonary edema or renal failure). Angiotensin-converting enzyme inhibitors and angiotensin II receptor blockers are strictly contraindicated.

Magnesium sulphate is used as an anticonvulsant with a simultaneous antihypertensive effect, which is the drug of choice for the prevention and treatment of seizures in hospitalized women due to insufficient treatment of severe pre-eclampsia

Magnesium sulphate has been proven to prevent the development of eclampsia and is the drug of choice for its treatment. All women with eclampsia should receive magnesium sulphate during labor and for 24 hours after delivery. Magnesium therapy is a bolus injection of 4 g of magnesium sulphate dry matter (IV over 5 minutes) followed by a continuous intravenous infusion at a rate determined by the patient's condition. Magnesium therapy is started from the moment of hospitalization if the diastolic blood pressure is > 130 mm Hg. The purpose of magnesium therapy is to maintain the concentration of magnesium ions in the pregnant woman's blood at the level required for the prevention of seizures.

The adequacy of the dose of magnesium sulfate is determined by its serum level in the first 4-6 hours. If it is not possible to monitor serum magnesium levels, the presence/absence of clinical symptoms of magnesium sulfate toxicity (decreased knee reflexes, $PD < 14$) should be carefully assessed hourly.

Monitoring of a pregnant woman's condition during antihypertensive and magnesium therapy includes blood pressure measurement every 20 minutes; heart rate calculation; monitoring of respiratory rate and pattern (respiratory rate should be at least 14 per 1 minute); determination of O₂ saturation (at least 95%); cardiac monitoring; ECG; checking knee reflexes every 2 hours; monitoring of hourly diuresis (at least 50 ml/hour). In addition, the symptoms of increasing severity of pre-eclampsia are monitored: headache, visual disturbances (double vision, "flickering flies" in the eyes), pain in the epigastrium/lungs); increased heart rate and signs of hypoxia; decreased level of consciousness; fetal condition (auscultation of the heartbeat every hour, fetal monitoring).

Delivery tactics.

Delivery is carried out taking into account the obstetric situation. Preference is given to delivery through the natural birth canal with adequate anesthesia (epidural anesthesia or nitrous oxide inhalation).

Indications for a planned caesarean section in case of severe pre-eclampsia are progression of pre-eclampsia or deterioration of the fetus in a pregnant woman with an immature birth canal.

After delivery, treatment of pre-eclampsia is continued depending on the woman's condition, clinical symptoms and laboratory parameters. Blood pressure monitoring and antihypertensive therapy are required. Doses of antihypertensive drugs are gradually reduced, but not earlier than 48 hours after delivery. Magnetic therapy should be continued for at least 24 hours after delivery.

Pre-eclampsia in the postpartum period

A protective regime, blood pressure control, and a balanced diet are prescribed.

Laboratory examination: general blood count (hemoglobin, hematocrit, platelet count) and urine, biochemical blood test (ALT and AST, bilirubin, creatinine, urea, total protein), cholangiogram.

Treatment. If antihypertensive drugs are used before delivery, they are continued after delivery. In case of insufficient effectiveness of therapy, thiazide diuretics are added. If hypertension occurs for the first time after childbirth, treatment is started with thiazide diuretics. Magnesium sulphate is prescribed as indicated in case of risk of eclampsia. Careful monitoring of uterine involution is performed. Prevention of bleeding by administration of oxytocin.

Eclampsia

A high risk of developing eclampsia is indicated by severe headache, high hypertension (diastolic blood pressure >120 mmHg), nausea, vomiting, visual disturbances, pain in the right hypochondrium and/or epigastric region.

The main goals of emergency care are

- cessation of seizures;
- restoration of airway patency.

Tasks of intensive care after seizure control:

- Prevention of recurrent seizures;
- Elimination of hypoxia and acidosis (respiratory and metabolic);
- prevention of aspiration syndrome;
- emergency delivery.

First aid in the event of an eclampsia attack. Treatment in the event of a seizure begins on the spot. An intensive care unit is set up or the pregnant woman is admitted to the anesthesiology and intensive care unit. The patient is laid on a flat surface in a left-sided position, the airway is quickly freed by opening the mouth and pushing the lower jaw forward, and the contents of the oral cavity are evacuated. If possible, if spontaneous breathing is preserved, an airway is inserted and oxygen is inhaled. If prolonged apnea develops, immediately start forced ventilation with a nasolabial mask with 100% oxygen

in positive pressure mode at the end of exhalation. If the seizures recur or the patient remains in a coma, muscle relaxants are administered and the patient is transferred to artificial lung ventilation (ALV) in the mode of moderate hyperventilation.

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A woman who has suffered eclampsia is monitored in the intensive care unit or an individual fasting is organized.

The delivery is carried out urgently. If the obstetric situation does not allow for immediate delivery through the natural birth canal, a caesarean section is performed. The delivery is performed immediately after the seizure is eliminated on the background of constant administration of magnesium sulfate and antihypertensive therapy. If the seizure continues, urgent delivery is performed after the patient is transferred to mechanical ventilation. After the end of the surgical intervention, mechanical ventilation is continued until the patient's condition stabilizes. After delivery, treatment is continued according to the condition of the woman in labor. Magnetic therapy should continue for at least 48 hours.

Follow-up of a woman with pre-eclampsia/eclampsia after discharge from the maternity hospital. In an antenatal clinic with the participation of general practitioner conducts follow-up care for a woman who has experienced moderate or severe pre-eclampsia or eclampsia.

Women who need treatment with antihypertensive drugs are examined weekly after discharge from the maternity hospital with mandatory laboratory monitoring of proteinuria and creatinine concentration in the blood plasma.

If hypertension persists for 3 weeks after delivery, the woman is admitted to a therapeutic hospital. The duration of follow-up after moderate or severe pre-eclampsia or eclampsia is 1 year.

Recommend that women who have had pre-eclampsia have their blood pressure monitored daily for a year after delivery, as large prospective studies have shown that women who have had gestational hypertension or pre-

eclampsia have an increased risk of developing hypertension in the future; death from stroke; and death from all cardiovascular causes.

Therefore, such women should be under the supervision of a physician and undergo regular check-ups (cholesterol and glucose testing annually).

Clinic and diagnosis of ectopic pregnancy

Causes of ectopic pregnancy: chronic inflammation of the uterine appendages, abnormal development of the fallopian tubes, adhesions in the pelvic area caused by endometriosis, appendicitis, infectious processes after childbirth or termination of pregnancy, surgery on the fallopian tubes, use of IUCDs, minipill and medroxyprogesterone injections, endocrine disorders. In gynecology, tubal pregnancy is more common, with tubal rupture or tubal abortion.

Pregnancy disrupted by tubal rupture: acute onset, in which some women have a delayed period, lower abdominal pain spreads to the anus, sub-, supraclavicular area, shoulder or shoulder blade, accompanied by nausea or vomiting, dizziness up to loss of consciousness, sometimes diarrhea.

The patient is often lethargic, less often shows signs of anxiety, the skin and mucous membranes are pale, the extremities are cold, and breathing is often shallow. Tachycardia, weak pulse, low blood pressure. The tongue is moist, not coated. The abdomen is slightly distended, there is no tension in the abdominal wall muscles. On palpation, there is tenderness in the lower abdomen, more on the side of the lesion, and symptoms of peritoneal irritation are also expressed. Percussion - dullness in the lower abdomen.

Mirror examination: cyanosis and pallor of the vaginal mucosa and exocervix. Bimanual examination (very painful) reveals flattening or protrusion of the posterior or one of the lateral vaults. The uterus is easily displaced, as if "floating" in free fluid.

If in doubt about the correctness of the diagnosis, an abdominal puncture is performed through the posterior vaginal vault.

The termination of tubal pregnancy by the type of tubal abortion presents diagnostic difficulties, as it is characterized by a slow course and does not have a noticeable effect on the general condition of the patient. It should be emphasized that a carefully collected history is of invaluable assistance in the diagnosis of tubal abortion. The main triad of symptoms in tubal abortion is delayed menstruation, abdominal pain, and bloody vaginal discharge.

The abdomen is soft, painless to palpation. On examination in mirrors: loosening and cyanosis of the mucous membrane and bloody discharge from the cervical canal. Bimanual examination: slightly enlarged uterus, unilateral enlargement of the appendages (often sausage-shaped or retort-shaped); vaginal vaults may remain high or flattened.

Additional research methods:

1. Determination of chorionic gonadotropin (CG) in blood serum and urine.

2. ULTRASOUND.

3. Laparoscopy.

4. Histological examination of the endometrial scraping.

Treatment can be surgical and conservative. Surgical treatment of tubal pregnancy in most cases is salpingectomy. The purpose of this treatment is to save the woman's life. In cases uncomplicated by severe bleeding, organ-preserving operations can be performed, some of them during laparoscopy: salpingotomy, segmental resection and anastomosis, fimbria evacuation. Due to a certain risk of developing trophoblastic disease, it is recommended to study the level of hCG 2-3 weeks after surgery to compare with the previous level. In case of persistent or elevated hCG levels, repeat testing or methotrexate therapy is performed.

Conservative treatment with methotrexate is rarely used as an independent method.

Laparotomy is performed when a diagnosis of an aborted ectopic pregnancy is made. A delay in the operation can lead to catastrophic consequences. The first steps should be to remove the patient out of shock, stop bleeding and support the cardiovascular system.

Algorithm for the treatment of ectopic pregnancy.

Principles of management of patients with ectopic pregnancy:

1. Suspected ectopic pregnancy is an indication for urgent hospitalization.
2. Early diagnosis helps to reduce the number of complications and provides an opportunity to use alternative methods of treatment.
3. If an ectopic pregnancy is diagnosed, urgent surgical intervention (laparoscopy, laparotomy) is necessary. Surgical treatment of ectopic pregnancy is optimal. In modern practice, conservative methods of treating ectopic pregnancy can be used.
4. In the case of a pronounced clinical picture of a disturbed ectopic pregnancy, hemodynamic disorders, hypovolemia, the patient is immediately hospitalized for emergency surgery as soon as possible using a laparotomy approach. If the clinical picture is erased, there are no signs of hypovolemia and internal bleeding, pelvic ultrasound and/or laparoscopy are performed.
5. At the prehospital stage in case of ectopic pregnancy, the scope of emergency care is determined by the general condition of the patient and the amount of blood loss. Infusion therapy (volume, rate of administration of solutions) depends on the stage of hemorrhagic shock (see the protocol - "Hemorrhagic shock").
6. Severe condition of the patient, presence of severe hemodynamic disorders (hypotension, hypovolemia, hematocrit less than 30%) are absolute indications for surgical intervention.

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4. In the case of a severe clinical picture of a disturbed ectopic pregnancy, hemodynamic disorders, hypovolemia, the patient is immediately hospitalized for emergency surgery as soon as possible using a laparotomy approach. If the clinical picture is erased, there are no signs of hypovolemia and internal bleeding, pelvic ultrasound and/or laparoscopy should be performed.

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6. Severe condition of the patient, the presence of severe hemodynamic disorders (hypotension, hypovolemia, hematocrit less than 30%) are absolute indications for surgical intervention by laparotomy with removal of the pregnant fallopian tube and antishock therapy.

7. An integrated approach to the treatment of women with ectopic pregnancy is used, which includes: a) surgical treatment; b) control of bleeding, hemorrhagic shock, blood loss; c) management of the postoperative period; d) rehabilitation of reproductive function.

8. Surgical treatment is performed using both laparotomy and laparoscopic access. The advantages of laparoscopic techniques include:

- Shortening the duration of the operation;
- Reduction of the duration of the postoperative period;
- Shortening the length of hospital stay;
- Reducing the number of scarring changes in the anterior abdominal wall;
- cosmetic effect.

9. Performing organ-preserving operations in ectopic pregnancy is accompanied by the risk of developing trophoblast persistence in the postoperative period, which is the result of its incomplete removal from the fallopian tube and abdominal cavity. The most effective method of preventing this complication is a thorough abdominal toilet with 2-3 liters of saline and a single administration of methotrexate at a dose of 75-100 mg intramuscularly on the first or second day after surgery.

Operations used in case of tubal pregnancy:

1. Salpingostomy (tubectomy). A longitudinal salpingostomy is performed. After removal of the ovum, the salpingostomy is usually not sutured. If the

chorionic villi do not grow into the muscular membrane of the fallopian tube, it is limited to scraping it out.

2. Segmental resection of the fallopian tube. The segment of the fallopian tube containing the ovum is removed, after which the two ends of the tube are anastomosed. If it is impossible to perform a salpingo-salpingo anastomosis, both ends can be tied and the anastomosis can be performed later.

3. Salpingectomy. This operation is performed in case of a disrupted tubal pregnancy accompanied by massive bleeding. In this case, the operation and haemo-transfusion are performed simultaneously.

Surgical treatment is required in case of pelvic-peritonitis with pyosalpinx, pyovar and tub ovarian abscess.

Widespread peritonitis is characterized by early onset endogenous intoxication.

Classification of peritonitis according to K.S. Simonian:

Phase I - reactive; Phase II - toxic; Phase III - terminal.

Clinic: abdominal pain, protective tension of the abdominal wall muscles, positive symptoms of peritoneal irritation, persistent intestinal paresis.

High fever, shallow breathing, vomiting, restlessness and euphoria, tachycardia, cold sweat. Expressed leukocytosis with a shift in the leukocyte formula to the left and toxic neutrophil granularity, increased alkaline phosphatase levels, a sharp decrease in platelet count

Treatment in 3 stages: preoperative preparation, surgical intervention, intensive care in the postoperative period.

Preoperative preparation: gastric decompression, subclavian vein catheterization (infusion therapy is performed to eliminate hypovolemia and metabolic acidosis, correct water, electrolyte and protein balance, and detoxify the body), administration of cardiac medications, adequate oxygenation, and intravenous antibiotics in the highest possible dosage.

The scope of surgical intervention is strictly individual, a special requirement is the complete removal of the infection focus with subsequent drainage of the abdominal cavity.

The duration of infusion therapy in the postoperative period should pursue the following goals

- Elimination of hypovolemia by administration of colloidal solutions and protein preparations;
- replenishment of chloride and potassium loss;
- correction of acidosis;
- meeting the body's energy needs;
- antienzyme and anticoagulant therapy;
- Providing forced diuresis;
- fight against infection through the use of broad-spectrum antibiotics;

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- Providing forced diuresis;
- fight against infection through the use of broad-spectrum antibiotics;
- prevention and treatment of functional insufficiency of the cardiovascular system;
- prevention and elimination of hypovitaminosis.

It is very important to restore the motor-evacuation function of the stomach and intestines.

Questions:

- 1.What is the classification of pre-eclampsia?
- 2.What are the main theories of etiology, pathogenesis of pre-eclampsia?
- 3.What is the clinic of pre-eclampsia of varying severity?
- 4.What are the methods of assessing the severity of pre-eclampsia?
- 5.What are the doctor's tactics and methods of treatment of mild pre-eclampsia?
- 6.What are the doctor's tactics and methods of treatment of moderate pre-eclampsia?
- 7.What are the doctor's tactics and methods of treatment of severe pre-eclampsia?
- 8.What are the doctor's tactics and methods of treatment of pre-eclampsia in the postpartum period?
- 9.What is the clinic and diagnosis of eclampsia?
- 10.What is the first aid in the development of an eclampsia attack?
- 11.What are the obstetric tactics and treatment of eclampsia?
- 12.What is the follow-up of parturient with pre-eclampsia/eclampsia after discharge from hospital?
- 13.What is the classification of ectopic pregnancy?

14. What are the means of developing an acute abdomen in ectopic pregnancy?

15. What are the control means and methods for the development of ectopic pregnancy?

16. What are the criteria for monitoring the development of ectopic pregnancy?

17. What are the surgical interventions for the development and progression of ectopic pregnancy?

Literature used by the lecturer to prepare the lecture

Main:

1. Obstetrics and gynecology: in 2 books. - Book 1: Obstetrics: textbook (III-IV year of study) / V.I. Grishchenko, M.O. Shcherbyna et al. - K.: Medicine, 2020. - 424 p.

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3. Emergency conditions in obstetric practice: a practical guide / A.Y. Senchuk, V.G. Ginzburg, I.I. Chermak et al.

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3. <https://www.acog.org/>
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11. <http://www.aagu.com.ua/> Association of Obstetricians and Gynecologists of Ukraine