MINISTRY OF HEALTH PROTECTION OF UKRAINE
ODESSA NATIONAL MEDICAL UNIVERSITY

International Faculty

Department of Obstetrics and Gynecology

APPROVED
Vice-rector for scientific and pedagogical work
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METHODICAL DEVELOPMENT FOR PRACTICAL LESSONS FROM ELECTIVE DISCIPLINE

International Faculty 6th year

Elective discipline **"OBSTETRICS AND GYNECOLOGY IN THE PRACTICE OF A FAMILY DOCTOR"**

Practical lesson No 6. Topic: **Pharmacotherapy in pregnancy with extragenital diseases.**

Approved:

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Practical lesson No. 6

Topic: " Pharmacotherapy during pregnancy for extragenital diseases "

Purpose: To acquaint students with higher education with the development of scientific views on perinatal protection of the fetus, data on the physiological course of pregnancy, to learn the main issues of pharmacotherapy, pharmacokinetics and pharmacodynamics of drugs during pregnancy.

Basic concepts: In the process of teaching the material, the ability to diagnose the early stages of pregnancy, observe the physiological course of pregnancy and the properties of using pharmacological drugs for various forms of disorders is formed.

Equipment: Professional algorithms, structural and logical schemes, tables, models, video materials, results of laboratory and instrumental studies, situational problems, patients, case histories.

I. Organizational measures (greetings, verification of those present, announcement of the topic, purpose of the lesson, motivation of higher education seekers to study the topic).

A pregnant woman's body demonstrates its powerful mechanisms to family medicine doctors in the presence of extragenital pathology. The doctor's ability to use pharmacotherapy with an understanding of pharmacokinetics and pharmacodynamics has its own powerful mechanisms, as well as the removal of which ptological forms pregnancy is contraindicated, and which forms of its use.

2. Control of the reference level of knowledge (written work, written test, online test, face-to-face survey, etc.).

Knowledge requirements:

- Have the skills of communication and clinical examination of the patient;
- Ability to set clinical and preliminary diagnosis of the disease ;
- Ability to diagnose emergency conditions ;
- The ability to determine the principles of treatment of diseases, the necessary mode of work and rest, the nature of nutrition ;
- Be able to determine the principles of active management of the III period of childbirth, methods of analgesia during childbirth;
- Ways of harmful effects of medicinal substances on the fetus;
- Critical stages of development of the "mother-placenta-fetus" system;
- Degrees of teratogenicity of medicinal substances;
- Groups of factors affecting the placental barrier;
- Ability to use their pharmacotherapeutic knowledge;
- Ability to perform medical manipulations;
- Ability to maintain medical records.

List of didactic units:

- Mechanisms and properties of the pregnant body ;
- Extragenital pathology, what are its effects on the body ;
- Critical periods of embryo and fetus development;
- The use of pharmacotherapy in modern obstetrics ;
- Hygiene and nutrition of a pregnant woman;
- The concept of counseling and its ethical principles.

Questions (test tasks, tasks, clinical situations) to check basic knowledge on the topic of the seminar:

Question:

1. The ability to provide the family therapist with a timely diagnosis of extragenital pathology.
2. Possibilities at the current stage in meeting the physiological needs of the fetus in basic nutrients and energy .
3. Meeting the needs of a pregnant woman in basic nutrients and energy to preserve her health and the health of the fetus.
4. Ensuring a woman's comfortable well-being, good mood and high activity at all stages of pregnancy.
5 . The maximum variety of women's diets with the inclusion of all food groups in them.
6. Restriction of products with high sensitizing activity .
7. Maximum consideration of women's individual needs.
8. Wide use of specialized food products enriched with protein, essential fatty acids, vitamins, and mineral salts .
9. Intensity of uteroplacental blood circulation.
10. The ability of the drug to ionize and dissolve in lipids, the degree of binding to plasma proteins.

Typical situational tasks:

1. A 25-year-old pregnant patient came to the maternity ward with the diagnosis: Pregnancy I, 32-33 weeks. Childbirth I, I position, front view, main presentation. Threatening premature birth.

Task: What drug should the doctor prescribe for tocolytic therapy?

Answer : Ginipral, the recommended standard dose is 10 μg (1 ampoule of 2 ml) diluted in 10 ml of a 0.9% sodium chloride solution, administered over 5-10 minutes, then the indicators are resolved independently.

2. The first pregnant woman , 30 years old, came to the maternity ward with complaints about a pregnancy of 35-36 weeks . Childbirth I , I position, front view, main presentation. Severe preeclampsia ?

Task: What medicinal substance is the drug of choice ?

Answer: Initial dose of magnesium sulfate - 4 g slowly daily for 15 minutes. (prepare 4 g by adding 16 ml of 25% magnesium sulfate to 34 ml of water for injections). Maintenance dose - 1 g (3.33%) of magnesium sulfate/h. intravenous drip (prepare a 3.33% solution by adding 30 ml of 25% magnesium sulfate to 220 ml of 0.9% NaCl or Ringer's lactate) within 24 hours. after childbirth

Typical test tasks:

1. A 22-year-old first-time pregnant woman was admitted to the maternity ward with premature discharge of amniotic fluid. With the diagnosis: Pregnancy I, 18-19 weeks. Cramps are weak, the opening of the cervix is 2 cm. Which of the drugs should be prescribed to strengthen labor activity?

A. Folliculin.
B. Oxytocin 5 units intramuscularly.
C. Oxytocin 5 units intravenously in 400 ml of physical. solution
D. Methylergometrine. D
E. Desaminooxytocin.

2. Pregnant for 20 years, came to the maternity ward with a diagnosis: pregnancy 36-37 weeks n . Childbirth I. I position, front view, main presentation. Placental insufficiency. Fetal growth retardation syndrome. Which of the drugs is the most effective in treatment?

A. Actovegin.
B. Ascorbic acid.
C. Papaverine hydrochloride.
D. Ginipral.
E. Aloe extract liquid

3 . Pregnant for 27 years, came to the hospital with a diagnosis: pregnancy 9 weeks n . Threatening spontaneous abortion. What medicinal substance is the drug of choice?

A. Dufaston.
V. Ginipral.
C. Papaverine hydrochloride.
D. Dexamethasone.
E. Oxytocin

Correct answers: 1 – C; 2- A; 3 – A

3. Formation of professional abilities and skills (mastery of skills, conducting curation, determining the treatment scheme, conducting laboratory research, etc.):

• Content of tasks (tasks, clinical situations, etc.):

Interactive task:

the applicants into 3 subgroups. We work in women's consultation offices with pregnant patients at different stages of pregnancy, we give tasks:

Tasks for subgroups

And a subgroup. Collect the obstetric and gynecological and somatic history of the pregnant woman, determine the list of necessary clinical, laboratory and instrumental studies, establish the preliminary and clinical diagnosis of the disease

II subgroup. Draw up a treatment plan for the woman and determine management tactics.

III subgroup. Evaluate the correctness of the answers of subgroups I and II, if necessary, introduce corrections.

Unusual situational tasks:

1. Patient N., 44 years old, pregnant again, 28-28 weeks, complained of pain in the right iliac region, nausea, vomiting, elevated body temperature to the gynecologist of the women's consultation.

During the external obstetric examination, the following was established: longitudinal position of the fetus, main presentation, I position, front view. During the examination, gynecological problems do not bother the patient.

On general examination, the woman is frail, pale, has no appetite, and is bothered by pain in the right iliac region.

Task: What is the previous diagnosis? What are the further tactics of the examination, where to conduct the examination?

Answer: Diagnosis: Pregnancy II, Position of the fetus longitudinal, main presentation, I position, front view. Acute appendicitis.

For further examination and treatment, it is necessary to refer the patient to a surgical hospital.

2. Patient M, 30 years old, 32-33 weeks pregnant, complained of swelling of the left lower limb, pain in it. After hospitalization, a duplex scan of the veins of the lower extremities was performed, during which a floating thrombus of the deep femoral vein was detected.

External obstetric examination diagnosed the position of the fetus longitudinally, main presentation, II position, posterior view. No problems were found in obstetric pathology.

Task: What is the previous diagnosis? What complication can threaten the patient's life?

Answer: Diagnosis: Pregnancy 32-33 weeks, longitudinal position head presentation, II position, rear view. BODIES.

It is necessary to prescribe therapy, monitor the course of pregnancy in cases that are not amenable to correction, and, communicating with surgeons, direct the patient to the operative course of solving this problem.

Non-typical test tasks:

1. Childbirth is 25 years old, the third period of childbirth is actively being conducted. Which medicinal substances are used in this case?

A. Methylergometrine intravenously.
B. Misoprostol rectally.
C. Oxytocin intramuscularly 10 units.
D. Oxytocin intravenously 5 units.
E. Folliculin

2. A 27-year-old woman in labor, the weight of the fetus at birth was 4100 g. In the early postpartum period, bleeding began, the BCC deficit was 15%. What is the total volume of infusion-transfusion therapy should be prescribed?

A. Up to 2.5 l.
B. Up to 3 l.
C. Up to 4 l.
D. Up to 2 l.
E. Up to 3.5 l.

3 . Pregnant for 32 years, came to the hospital with a diagnosis: pregnancy 7 weeks. Complaints of vomiting up to 7 times a day. What medicinal substance is the drug of choice?

A. Aminazine.
B. Tocopherol acetate.
C. Papaverine.
D. Vitamin B6.
E. Vitamin B1.

4. Childbirth 30 years old, in the late postpartum period the temperature rose to 38°C. The diagnosis was established: postpartum metroendometritis. Which of the antibacterial drugs is the most acceptable?

A. Ceftriaxone.
V. Augmentin.
C. Ampicillin.
D. Metronidazole.
E. Penicillin

Correct answers: 1- C , 2-A, 3-A, 4-A.

•Recommendations (instructions) for the performance of tasks (professional algorithms, orienting maps for the formation of practical skills and abilities, etc.):

Most women during pregnancy take one or more medicines (on average four), not including vitamins and iron preparations.

The use of various medications during pregnancy is a very important issue, because prescribing a potentially dangerous drug to a pregnant woman can harm the future child, and it is also important because the presence of many drugs with contraindications for use during pregnancy significantly limits the possibilities of high-quality comprehensive treatment during this period.

The question of admissibility of certain drugs acquires special relevance and practical importance in the clinic of extragenital pathology of pregnant women. Pharmacological preparations can have a negative effect on the tone of the uterus, uteroplacental blood circulation and the balance of numerous hormonal factors that ensure the course of pregnancy. However, the central problem of drug therapy for pregnant women is the possible effect of drugs on the fetus - teratogenic, embryotoxic, fetotoxic.

Physiological changes that lead to a change in the concentration of medical drugs in the blood compared to the level of the achievable concentration in non-pregnant women are as follows:

- increase in intravascular volume;
- increase in glomerular filtration rate; a decrease in the level of blood plasma proteins, which leads to a decrease in the connection of the drug with blood proteins and an increase in the clearance of the drug;
- thinning of the membrane that separates the fetus from the mother, which leads to an increase in the transplacental diffusion capacity, as a result of which the ability of drugs to penetrate through the placenta increases;

- a decrease in the motor activity of the gastrointestinal tract, which is accompanied by a delay in the absorption of drugs when they are taken internally;
- acceleration of the destruction of drugs in the liver.

The following risk categories for the use of drugs during pregnancy, developed by the American Food and Drug Administration (FDA - Food) , are widely used all over the world and Drug Administration):

A - drugs that were taken by a large number of pregnant women and women of childbearing age without any evidence of their influence on the frequency of development of congenital malformations or harmful effects on the fetus;

B – drugs that were used by a limited number of pregnant women and women of childbearing age without any evidence of their influence on the frequency of development of congenital malformations or harmful effects on the fetus. At the same time, no increase in the frequency of damage to the fetus was found in animal studies, or such evidence was obtained, but the proven dependence of the obtained results on the use of drugs was not determined;

C – drugs that have demonstrated teratogenic or embryotoxic effects in animal studies. There are suspicions that they may cause a negative adverse effect on the fetus or newborn (due to pharmacological properties), but such that they do not cause the development of congenital anomalies. No controlled studies have been conducted on humans;

O - drugs that cause or are suspected of causing congenital anomalies or irreversible damage to the fetus. The risk to the fetus should be weighed against the potential benefit from the use of the medicinal product.

X is a drug with a high risk of developing congenital anomalies or permanent damage to the fetus, as there is evidence of their teratogenic or embryotoxic effect in both animals and humans. They should not be used during pregnancy.

Medicines can be divided into three groups:

- LPs that do not penetrate the placenta, therefore do not cause a negative effect on the fetus;
- LPs that penetrate the placenta, but do not cause a negative effect on the fetus;
- LPs that penetrate the placenta and accumulate in the tissues of the fetus, and have a negative effect on the fetus.

The influence of medicinal substances on **the central nervous** system of the fetus is of particular importance. The embryotoxic effects of drugs are more pronounced, the shorter the period of intrauterine development of the fetus and the greater the pharmacological activity and dose of the drug.

The distribution of the drug in the body is influenced by numerous factors: changes in hemodynamics, the volume of circulating blood, the amount of adipose tissue in the body, and the protein composition of the blood. Hemodynamic changes are caused by an increase in the volume of plasma during pregnancy (by 30-40%), extracellular fluid (by 5-8 l) and an increase in the number of erythrocytes by 18-20%. An increase in the amount of fat in the body during pregnancy (on average by 3-4 kg) is important for fat-soluble drugs that accumulate in this tissue.

Teratogenesis includes the concept of the development of not only organic, but also functional anomalies in a newborn. After the end of the embryogenesis period, you can no longer be wary of malformations.

Today, such critical periods in the life of the embryo are distinguished,

1. From the moment of conception to 11 days.
2. 11 days to 3 weeks, when organogenesis begins in the fetus. moment of neural tube closure).
3. Between 4 and 9 weeks, when the danger of fetal growth retardation persists, but the teratogenic effect is practically no longer manifested.
4. The fertile period (from the 9th week to the birth of the child), when postnatal dysfunctions and various behavioral abnormalities may occur.

LP , the use of which is contraindicated during pregnancy .

Antibacterial agent and drug : _ _

-antibiotics tetracycline of the new series - violation of the formation of bone tissue in the fetus and have hepatotoxicity properties;

- chloramphene and col (levom and cet and n) - risk inhibition of bone marrow function and the possibility of the development of " c i rogo syndrome in newborns " ;

- fluoride and nolon - act on muscle joints and cartilage _ in feathers and growth in the fetus and newborn ;

- co-trimoxazole (b and septol and its analogues) - significantly increases the risk of congenital anomalies and the fetus ;

-r and fampicin, l and nkom and tsin, eti onam and d, chloroch and n (delag and l), gr and zeofulv and n, levor and n.

Other LPs : _

- all statins (lovastatin , si mvastatin , mevacor , zocor) ;
- indirect anti - coagulants (phenilin , pelentan) ; _
- Antistimulant drugs (dimedrol , ppolfen , suprast) ; _ _ _ _ _
- oral and sugar-lowering drugs ;
- antigonadotropic drugs (danazol , klostil beg and t) ; _
- androgen and ;
- antidepressants , barbiturates , neuroleptics (galoper and dol , and zercin) ;
- benzodiazepines and azepines ; _ _ _

- antiparkinson and other drugs (parkopan , cyclodol, nacom) ;
- nonsteroidal anti - inflammatory drugs (melox and kam , butad and on) .

Beta-lactam antibiotics.

Penicillins. Natural (biosynthetic) penicillins: phenoxymethylpenicillin, bicillins are drugs of a narrow respiratory spectrum. The causative agents of diphtheria, syphilis and most anaerobes are sensitive to them. Semi-synthetic penicillins are divided into:

-penicillinase-resistant with predominant activity against Gram (+) microorganisms ("antistaphylococcal"): methicillin, oxacillin, cloxacillin, dicloxacillin;

- broad-spectrum penicillins (with the exception of penicillinase-producing staphylococci and Pseudomonas aeruginosa): ampicillin, amoxicillin;

- a wide spectrum of action with additional activity against blue-pustular bacillus: carbenicillin, azlocillin;

- penicillins with predominant activity against Gram(-) microorganisms: mecilinam, acidocilin.

Cephalosporins exceed penicillin in antibacterial activity.

Cephalosporins of the first generation: cefazolin, cephalothin, cephalexin - antibiotics with a relatively narrow spectrum of action.

Cephalosporins of the II generation: cefotoxin, cefuroxime have a wider spectrum of antimicrobial action. The possibilities of antibacterial therapy of pregnant women with drugs of the II generation are extended by means that can be used in two therapeutic forms. Cefuroxime has a bactericidal effect against streptococci, methicillin-sensitive staphylococci and a number of Gram (-) microorganisms (hemophilic bacilli, gonococci, enterobacteria).

In *third-generation cephalosporins,* the spectrum of antimicrobial activity is shifted towards Gram(-) pathogens and anaerobes - the main pathogens of nosocomial infections. Ceftazidime exceeds all other antibacterial agents in terms of its anti-blue fever activity. Ceftriaxone is characterized by prolonged action (used once a day) and high penetrating ability to various organs and tissues, including through the blood-brain barrier.

Cephalosporins of the I and V generations overcome the resistance of most Gram (-) bacteria and have high activity against Gram (+) bacteria, including penicillin-resistant pneumococci. The standard is cefepime. The drug penetrates well into all organs and tissues, and its high concentration in the blood after intravenous use requires a 2-time administration regimen. A wide spectrum of antimicrobial action allows the use of cefepime for monotherapy of nosocomial infections, but when anaerobic flora is suspected or the presence of Pseudomonas aeruginosa, it must be combined with metronidazole or amikacin, respectively. It is safe during pregnancy, does not cause damage to the fetus, does not increase the

allergy of the pregnant woman. It also does not have a negative effect on the newborn, as it penetrates into breast milk in low concentrations.

Carbapenems: (thienam, meronem) have an extremely wide spectrum of antimicrobial activity, which includes almost all clinically significant Gram (+) and Gram (-) aerobes and anaerobes.

Aminoglycosides . Aminoglycosides are not absorbed from the gastrointestinal tract, so they are used parenterally. First-generation drugs include streptomycin and kanamycin, which have high oto- and nephrotoxicity and even limited indications for use.

Tetracyclines. They are characterized by a bacteriostatic effect, a wide spectrum of antimicrobial action, however, they are highly toxic, which does not allow their use during pregnancy.

Macrolides. They are considered relatively safe during pregnancy (with the exception of roxithromycin). They are effective against a relatively wide range of Gram (+) and Gram (-) bacteria, as well as rickettsiae and spirochetes, and can suppress the development of some strains of pathogens resistant to penicillins.

Spiramycin (rovamycin) is more active than other macrolides against streptococci, including pneumococci, resistant to being successfully used to treat toxoplasmosis during pregnancy.

Rifampicins. They are characterized by a wide spectrum of bactericidal action, which includes mycobacteria, rickettsia, bacteroids, legionella, chlamydia. However, pathogens quickly develop resistance to it, so it is mainly used for tuberculosis and severe coccal infections. In an experiment on animals, a teratogenic effect was found.

Lincosamines. Lincomycin and clindamycin are among the effective reserve antibiotics for infections caused by strains of staphylococci and other Gram (+) pathogens.

Vancomycin is the only antibiotic that is effective against methicillin-resistant strains of staphylococci.

Sulfanilamides . They have a wide range of antimicrobial action against aerobes and anaerobes, actinomycetes and the causative agent of toxoplasmosis. But they cause many side effects.

Fluoroquinolones. Ciprofloxacin, ofloxacin are highly active antimicrobial drugs of a wide spectrum of action, effective against both Gram (+) and Gram (-) microorganisms.

Antifungal agents.

Azole derivatives - fluconazole, itraconazole are not recommended during pregnancy. One of the effective and safe means that can be used in pregnant women is natamycin, which is recognized as one of the drugs of choice for the treatment of candidiasis. It contributes not only to etiopathogenetic treatment, but also eliminates the factors contributing to fungal infection (remediation of the "depot" infection in the intestine).

In case of local candidiasis and other fungal lesions, nystatin is relatively safe. However, its effectiveness is low, especially for genital candidiasis in pregnant women. Clotrimazole has a wide spectrum of action. One of the most effective means of treatment of systemic mycoses is fluconazole. During pregnancy, the drug should be used only for life-threatening fungal infections.

Peripheral vasodilators .

Verapamil affects the elements of the conduction system of the myocardium, slows down the heart rate and has an antiarrhythmic effect. It is used for increased blood pressure in pregnant women and for the treatment of fetal tachycardia.

Nifedepine is used for the treatment of arterial hypertension and preeclampsia, as well as as a tocolytic agent for the treatment of the threat of premature birth, the pathological preliminary period, and for the preparation of pregnant women for childbirth. In animals, nifedepine has a teratogenic and embryotoxic effect.

Diuretics

Diuretics should be prescribed with caution to pregnant women, especially in severe forms of late gestosis.

Thiazide and thiazide-like diuretics act on the distal segment of the initial part of the renal tubules, increase the excretion of sodium, water and chlorine. They lower blood pressure by increasing sodium excretion, decreasing plasma volume, extracellular fluid, and cardiac output. The hypotensive effect of diuretics is also associated with a decrease in total peripheral vascular resistance.

Hydrochlorothiazide is a diuretic with moderate strength and medium duration of action. In the first trimester of pregnancy, it reduces blood flow in the vessels of the umbilical cord and placental transfusion, reduces the endocrine function of the placenta, changes the clearance of estradiol, thereby can lead to the appearance of congenital malformations of the fetus. When it is used in the third trimester of pregnancy, there is more frequent induction of labor, inertness of the uterus, and an increase in perinatal mortality.

furosemide penetrates well through the placenta, its concentration in umbilical cord blood is equal to that in the mother's blood plasma.

Antiarrhythmic drugs.

Lidocaine is an effective means of treating gastric rhythm disorders in pregnant women. It quickly penetrates the placenta. The tool can cause respiratory depression of the newborn, various changes in the heart rate of the fetus.

Antiplatelets and anticoagulants .

Heparin is a natural anticoagulant of direct action, it forms a complex with antithrombin III, converts it into an active form, as a result of which the blood coagulation process slows down. It does not penetrate the placenta, so it does not cause congenital anomalies, however, a decrease in calcium content may adversely affect the condition of the fetus. Long-term use of heparin can lead to osteopenia in the mother and fetus. The risk of fetal bleeding increases.

Anticoagulants of indirect action are used to prevent venous thrombosis.

Analgesic means.

Paracetamol is characterized by an optimal ratio of effectiveness and safety, as well as a variety of dosage forms. It has analgesic, antipyretic and moderate anti-inflammatory effects. Does not have a damaging effect on the mucous membrane of the gastrointestinal tract. Has no effect on the function of platelets and does not increase the risk of hemorrhages. Penetrates through the placenta, but does not have a negative effect on the fetus.

Analgin has analgesic, anti-inflammatory and antipyretic effects. With long-term use, suppression of hematopoiesis is possible. In large doses and with long-term treatment, it can cause anemia, impaired liver and kidney function of the fetus.

Narcotic analgesics .

Morphine is the main representative of the group of narcotic analgesics. It quickly penetrates the placenta and can cause drug addiction in the fetus and later in the newborn. Morphine increases the contractility of the uterus and causes respiratory depression in the newborn.

Promedol does not increase the number of congenital anomalies, but the formation of drug addiction in the fetus is likely. Causes depression of the newborn's breathing. Duration of depression 1 hour or more after childbirth. The mental parameters of the child do not suffer.

Tramadol - has a relatively low narcotic potential and a wide range of indications for moderate and severe acute and chronic pain syndromes.

Anti-inflammatory agents and.

Glucocorticoids have anti-inflammatory and immunosuppressive effects. When taken during the entire pregnancy, their influence on the duration of pregnancy and the frequency of birth defects was not noted, but a slight decrease in the body weight and length of newborns was observed. The children's neurological condition and mental development were normal.

Cortisone is used only as a means of replacement therapy for adrenal insufficiency during pregnancy.

Prednisolone can lead to the development of congenital cataracts and a decrease in the function of the adrenal cortex, causes immunosuppression, which increases the risk of infection of the mother and fetus.

Dexamethasone is more anti-inflammatory than prednisolone. Its mineralocorticoid effect is the least pronounced. It penetrates the placenta and can have a negative effect on the fetus. It causes leukocytosis in the fetus, a decrease in the function of the cortex of the adrenal glands, an increase in the level of androgens, and virilization of the female fetus. The drug reduces the level of estriol and cortisol in the mother's blood. In humans, it does not increase the frequency of congenital anomalies of the fetus. It significantly reduces the likelihood of development and severity of the syndrome of respiratory disorders in newborns and mortality from these and other complications in premature infants.

Nonsteroidal anti-inflammatory drugs.

Acetylsalicylic acid in low doses (60-80 mg per day) is used to prevent preeclampsia and eclampsia. The toxic effect on the fetus is not manifested in these doses. The use of acetylsalicylic acid in large doses increases the number of congenital anomalies and perinatal mortality, reduces the weight of the fetus, and leads to intrauterine intoxication with salicylates.

Indomethacin during pregnancy is used in patients with joint diseases, autoimmune diseases, and is also sometimes used when there is a threat of premature birth, as it has a tocolytic effect. It is relatively safe for the fetus during pregnancy, but care should be taken when prescribing it, as it crosses the placenta and is detected in the blood of the fetus. The fetus may have early closure of the ductus arteriosus, which causes pulmonary hypertension in infants.

• ***Requirements for work results:***

- To draw up a plan of the necessary clinical and laboratory and instrumental studies for pathological conditions in pregnant women ;
- Evaluate the results of clinical laboratory and instrumental research;
- To be able to organize consultations for pathological processes in pregnant women;
- Establish a preliminary and clinical diagnosis of the disease;
- Be able to diagnose the condition of a pregnant woman;
- Provide emergency medical care for conditions in pregnant women.

• ***Control materials for the final stage of the lesson: problems, tasks, tests, etc***

Unusual situational tasks:

1. A mother of two children complains of the presence of soft-elastic nodes on the lateral surface of the left lower leg and left thigh, the swelling occurs at the end of the day. After resting at night, the swelling disappears. The onset of the disease is associated with pregnancy and childbirth. But the owl has elastic stockings.

Task:

What will be the preliminary diagnosis? With what is it necessary to carry out a differential diagnosis?

Answer :

Diagnosis: Postpartum period. Varicose veins of tender limbs .

It is necessary to carry out a differential diagnosis with post-thrombophlebitic syndrome .

2. A repeatedly pregnant woman , 35-36 weeks , was admitted to a surgical hospital with a diagnosis of acute calculous cholecystitis. During the examination, the patient was found to have mechanical jaundice caused by choledocholithiasis.

Task:

Make a diagnosis. Conservative therapy without effect. What further tactics are necessary for the patient.

In response :

Diagnosis. Pregnancy II. 35-36 weeks. Acute calculous cholecystitis.

Operative intervention for choledocholithiasis was performed . However, it is necessary to coordinate the operative tactics with the obstetrician-gynecologist in order to resolve the issue of simultaneous termination of the patient's pregnancy by cesarean section during surgery .

Test tasks STEP-2:

1. The mother of two children complains of the presence of soft-elastic nodes on the lateral surface of the left lower leg and left thigh, swelling at the end of the day. After resting at night, the swelling disappears. The onset of the disease is associated with pregnancy and childbirth. Apply elastic stockings. What will be the preliminary diagnosis?

A. Varicose veins of tender limbs
B. Thrombophlebitis of subcutaneous veins of tender limbs
C. Thrombosis of deep veins of tender limbs
D. Postthrombophlebotic syndrome
E. Thrombosis of the veins of the small pelvis

2. A pregnant woman (28 weeks) was brought to the hospital in critical condition with a diagnosis of thrombophlebitis of the deep femoral vein, which was complicated by thromboembolism of small branches of the pulmonary artery. A deep femoral vein thrombosis was found during a duplex examination. What further tactics should be used in relation to this patient?

A. Warm baths, hirudotherapy, heparin ointment
B. Antibiotic therapy, bronchoscopy, sanitation of the bronchial tree, prevention of pneumonia.
C. Therapeutic walking, prescribing warfarin, foot massage.
D. Bed rest, prescription of heparin, solution to the issue of installing a coffee filter
E. Therapeutic tactics

3. A 39-year-old woman is in serious condition. Pregnancy is 10 weeks, pregnancy is desirable. Exhausted He complains of frequent vomiting of coffee grounds and fresh blood mixed with pieces of tissue, sudden general weakness, thirst, dry mouth, dizziness. After comprehensive hemostatic treatment with repeated

hemotransfusions, the bleeding stopped. The patient's condition gradually improved. Feces became normal in color, HN increased from 68g/l to 90g/l. X-ray: in the antral part of the stomach, a cup-shaped cancer with a diameter of 6.5 cm. Your diagnosis? What treatment is currently indicated for the patient?

A. Anticipation of natural childbirth and operative treatment for cancer.

B. Immediate early termination of pregnancy, complex chemo-radiation and surgical treatment of stomach cancer

C. Only radiation therapy, termination of pregnancy by caesarean section.

D. Chemotherapy, termination of pregnancy.

E. Symptomatic therapy, termination of pregnancy only when the condition of the fetus worsens.

Correct answers: 1-A; 2 – D ; 3 - B

4. Summary of results (criteria for evaluating learning results)

Current control: oral survey, assessment of communication skills during role play, solving situational clinical tasks, assessment of activity in class.

Final control : credit.

Evaluation of the current educational activity in a practical lesson :

Independent and individual work of students involves independent processing of the educational material presented at the SRS, and is carried out in the following forms: studying educational, specialized literature, directive documents, writing essays on the topics of missed classes, etc.

Independent work of students during the ongoing control of mastering the topics of the sections in the corresponding classroom classes. Mastery of topics that are assigned only to independent work is checked during test control.

Assessment of individual student tasks

In order to increase the arithmetic average of all grades received by the student while studying the discipline, the grade for individual assignments is awarded to the student only on the condition of successful completion and defense

Current performance

Evaluation of the success of studying each topic in the discipline is carried out on a traditional 4-point scale.

The following methods of monitoring student learning outcomes are used: oral survey on the subject of the lesson; testing; solution of situational tasks; drawing up a plan for examination and treatment of patients, analysis of the results of clinical and laboratory and instrumental studies, substantiation of the diagnosis, determination of indications for surgery, practice of practical skills on phantoms, etc.

At the end of the study of the discipline, the current success is calculated as the average current score, that is, the arithmetic average of all the grades received by the student according to the traditional scale, rounded to 2 (two) decimal places, for example, 4.75.

At the last practical lesson, the teacher is obliged to announce to the students the results of their current academic performance, academic debt (if any).

Assessment criteria

- the grade "excellent" is given to a student who worked systematically during the semester, showed during the exam versatile and deep knowledge of the program material, is able to successfully perform the tasks provided for by the program, mastered the content of the main and additional literature, realized the relationship of individual sections of the discipline, their importance for the future profession, showed creative abilities in understanding and using the educational program material, showed the ability to independently update and replenish knowledge; level of competence - high (creative)
- the grade "good" is awarded to a student who has demonstrated complete knowledge of the curriculum material, successfully completes the tasks provided for by the program, mastered the basic literature recommended by the program, has shown a sufficient level of knowledge in the discipline and is capable of their independent updating and updating in the course of further education and professional activities; the level of competence is sufficient (constructive and variable);
- the grade "satisfactory" is assigned to a student who has demonstrated knowledge of the main curriculum material to the extent necessary for further study and further work in the profession, copes with the tasks provided for in the program, made some mistakes in the answers on the differential assessment and when completing the tasks, but has the necessary knowledge to overcome the mistakes made under the guidance of a scientific and pedagogical worker; level of competence - average (reproductive)
- the grade "unsatisfactory" is assigned to a student who did not demonstrate sufficient knowledge of the main curriculum material, made fundamental mistakes in the performance of the tasks provided for by the program, cannot use the knowledge in further studies without the help of a teacher, was unable to master the skills of independent work; the level of competence is low (receptive-productive).

Recommended Books

Main:

1. Obstetrics and gynecology: in 2 books. - Book 1. Obstetrics: a textbook (University III-I V : r.a.) / V.I. Hryshchenko, M.O. Shcherbiny and others. - K.: Medicine, 2020. - 424 p.

2. Obstetrics and gynecology: in 2 books. - Book 2. Gynecology: a textbook (University III-IU: r.a.) / V.I. Hryshchenko, M.O. Shcherbiny and others. - K.: Medicine, 2020. - 376 p.

3. Obstetrics and gynecology: National a textbook for medical universities of IV accreditation levels in 4 vols.// Nat. textbook in 4 volumes / V. M. Zaporozhan, T. F. Tatarchuk, I. Z. Gladchuk, V. V. Podolsky, N. M. Rozhkovska, V. G. Marichereda, A. G. Volyanska. - K.: VSV "Medicine", 2017. - 696 c.

4. Training manual on midwifery (edited by I.B. Ventskivska, V.P. Lakatosha, V.M. Kushcha). - K., 2018. - RA-HARMONY - 210 p.

5. Nekoval I.V., Kazanyuk T.V. Pharmacology: textbook. All-Ukrainian Specialized Publishing House "Medicine"., 2022, p-552.

6. Emergencies in midwifery practice: a practical guide / A.Ya. Senchuk, V.G. Ginzburg, I.I. Chermak and others; under the editorship Prof. AND I. Senchuk - Kyiv: Phoenix, 2019. - 336 p.

7. Premature childbirth: education. manual / G.S. Manasova, K.O. Nitochko, M.V. Shapoval – Ternopil: Step. 2023. – 186 p.

8. Emergencies in obstetrics: (content modules from the discipline "Obstetrics and Gynecology"): Education. manual For students Higher honey. education institutions / edited by B.M. Ventskivskyi, A.Ya. Senchuk, O.O. Zelinskyi - "TES" Publishing House, 2011 - 260 p.

9. Clinical Obstetrics and Gynaecology: 4th Edition / Brian A. Magowan, Philip Owen, Andrew Thomson. - 2021. - 454 p.

10. Oats, Jeremy Fundamentals of Obstetrics and Gynecology [Text]: Liewellyn-Jones Fundamentals of Obstetrics and Gynecology / J. Oats, S. Abraham. – 10 th ed. – Edinburgh [etc.]: Elsevier, 2017. – VII, 375 p.

11. Obstetrics: Normal and Problem Pregnancies, 7th Edition S. Gabbe, JR Niebyl, JL Simpson, MB Landon, HL Galan, ERM Jauniaux, DA Driscoll, V. Berghella and WA Grobman, Elsevier. – 2017. – 1320 pp.

12. Obstetrics by Ten Teachers (20th ed) Louise C. Kenny, Jenny E. Myers. – CRC Press. – 2017. – 342 pp.

Additional:

1. Diagnostics of obstetric and gynecological endocrine pathology: [educational manual for intern doctors and trainee doctors of institutions (fac.) post-diploma. Education of the Ministry of Health of Ukraine] / edited by V.K. Likhachev; V.K. Likhachev, L.M. Dobrovolska, O.O. Taranovska and others; UMSA (Poltava). – Vinnytsia: E.V. Maksimenko Publisher, 2019. – 174 p.

2. Simulation medicine. Experience. Acquisition Prospects: practice. advisor / V.M. Zaporozhian, O.O. Tarabrin – Sumy: University. Book, 2018. – 240 p.

3. Family planning. Educational and methodological manual / N.G. Hoyda, O.V. Hryshchenko, V.P. Kvashenko, O.V. Kravchenko et al. / Kyiv, 2016.

– 444 p.

4. Situational problems in gynecology: study guide. / I.Z. Gladchuk, A.H. Volyanska, G.B. Shcherbina and others; under the editorship Prof. FROM. Hladchuk - Vinnytsia: "Nilan-LTD" LLC, 2018. - 164 p.

5. Situational problems in midwifery: study guide. / V.M. Zaporozhan , A.H. Volyanska , G.L. Lavrynenko and others; under the editorship Acad. National Academy of Sciences of Ukraine, prof. V.M. She is pregnant . – Odesa: ONMedU, 2014. – 140 p

6. The model of screening for preeclampsia in the second and third trimesters of gestation / L. Berlinska, V. Marichereda, O. Rohachevskyi, A. Volyanska, G. Lavrynenko // Electronic Journal of General Medicine. - 2023 - 20(3), em473, https://www.ejgm.co.uk/

7. Significance of cystatin C in preclinical diagnosis of preeclampsia in pregnant women / Marichereda V.G., Gladchuk I.Z., Berlinska L.I. // Actual issues of pediatrics, obstetrics and gynecology. 2019. - T2. - P. 133-137.

8. Peculiarities of dopplerometric indicators of the fetoplacental complex in women with a threat of premature birth against the background of the use of metabolic therapy / Gladchuk I.Z., Panchuk E.A. // Collection of scientific works of the association of obstetricians-gynecologists of Ukraine. – 2019. – No. 2 (44). - P. 31-34.

9. The current "Clinical Protocols" were approved by the order of the Ministry of Health of Ukraine for Obstetrics and Gynecology.

INFORMATION RESOURCES

- educational literature;
- methodical development of practical classes;
- methodical development of lectures;
- multimedia presentations of lectures.
- modern technical means of education
- regulatory documents of the Ministry of Health of Ukraine on obstetrics and gynecology:

- Order of the Ministry of Health of Ukraine dated August 9, 2022 No. 1437 " On approval of standards of medical care "Normal pregnancy".
- Order of the Ministry of Health of Ukraine dated January 24, 2022 No. 151 " On approval of the Unified clinical protocol of primary, secondary (specialized), tertiary (highly specialized) medical care "Hypertensive disorders during pregnancy, childbirth and the postpartum period."

- Order of the Ministry of Health of Ukraine dated 05.01.2022 No. 8 "On the approval of the Unified clinical protocol of primary, secondary (specialized) and tertiary (highly specialized) medical care "Caesarean section" .
- Order of the Ministry of Health of Ukraine dated 13.04.2016 No. 353 (as amended on 23.09.2016 No. 994) " On approval of the Unified clinical protocol of primary, secondary (specialized) and tertiary (highly specialized) medical care " Abnormal uterine bleeding " .
- Order of the Ministry of Health of Ukraine dated 05.05.2021 No. 869 "On the approval of the Unified clinical protocol of primary, secondary (specialized), tertiary (highly specialized) medical care "Endometrial hyperplasia" .
- Order of the Ministry of Health of Ukraine dated September 24, 2022 No. 1730 " On approval of standards of medical care "Ectopic pregnancy".
- Order of the Ministry of Health of Ukraine dated January 21, 2014 No. 59 On the approval and implementation of medical and technological documents on the standardization of medical care for family planning.
- Order of the Ministry of Health of Ukraine dated November 14, 2007 No. 716 "On approval of the clinical protocol for obstetric care "Prevention of transmission of HIV from mother to child".
- Order of the Ministry of Health of Ukraine dated 03 . 11 . 2008 No. 624 . " On approval of clinical protocols for obstetric and gynecological care " .
- Order of the Ministry of Health of Ukraine dated 27.12.2006 No. 900. Clinical protocol on obstetric care. " Fetal distress during pregnancy and childbirth ".
- Order of the Ministry of Health of Ukraine dated 27.12.2006 No. 906. Clinical protocol on obstetric care. Perinatal infections.
- Order of the Ministry of Health of Ukraine dated December 29, 2005 No. 782 On the approval of clinical protocols for obstetric and gynecological care.

Electronic information resources

1. https :// www . cochrane _ org /
2. https :// www . ebcog . org /
3. https :// www . Acog . org /
4. https :// www . update . com
5. https :// online . Lexi . com /
6. https :// www . ncbi . nlm . nothing _ gov /
7. https :// pubmed . ncbi . nlm . nothing _ gov /
8. https :// www . the lancet . com /
9. https :// www . rcog . org . UK /
10. https :// www . npwh . org /
11. http :// www . oh _ com . ua / Association of Obstetricians and Gynecologists of Ukraine