

MINISTRY OF HEALTH OF UKRAINE

ODESA NATIONAL MEDICAL UNIVERSITY

Faculty international
Department of Obstetrics and Gynecology

CONFIRMED BY
Vice-rector for scientific and pedagogical work
Eduard BURIACHKIVSKYI
29" August 2024



**METHODOLOGICAL RECOMMENDATIONS FOR PRACTICAL
LESSONS ON AN ELECTIVE DISCIPLINE**

Faculty international, 4th year

Elective discipline "FAMILY PLANNING. CONTRACEPTION"

Practical class #6. Topic: "Contraception for women with extragenital pathology"

Approved:

Meeting of the Department of Obstetrics and Gynaecology
Odesa National Medical University

Protocol No 1 of 29 August 2024.

Head of department _____ (Ihor GLADCHUK)

Developers:

Ph.D, Associate Professor of the

Department of Obstetrics and Gynaecology _____ Lavrynenko H.L.

Ph.D, Associate Professor of the

Department of Obstetrics and Gynaecology _____ Stepanovichus O.M.

Practical class #6

Topic: "Contraception for women with extragenital pathology"

Aim: To systematize and deepen knowledge about modern methods of contraception for women with extragenital pathology and HIV. Learn the specifics of counseling women with extragenital pathology and HIV. Be able to draw up a plan for examining a woman before starting to use contraception, based on the characteristics of her pathological condition.

Basic concepts: Peculiarities of counseling women with extragenital pathology. Drawing up a woman's examination plan before starting to use contraception, based on the specifics of her pathological condition. Methods of contraception for women with extragenital pathology.

Peculiarities of counseling women with HIV. Methods of contraception in women with HIV.

The use of contraceptives for the most common extragenital pathology:

- Features of contraception in women with arterial hypertension
- Peculiarities of contraception in women with coronary heart disease
- Features of contraception in women with diseases of the liver and gall bladder (viral hepatitis, cholestasis, gallstone disease)
- Peculiarities of contraception in women with thyroid dysfunction.
- Features of contraception in women with diabetes.
- Features of contraception in women with damage to the heart valves.
- Features of contraception in women with varicose veins, deep vein thrombosis.

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

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

According to the key international documents and regulations on the protection of the reproductive health of the population, family planning is considered the main means of preserving the health of women and men, and also belongs to the category of fundamental human rights. World experience shows that the use of modern methods of contraception, as a means of preventing unplanned pregnancy, leads to a decrease in the frequency of artificial and illegal abortions, which allows to reduce maternal mortality by 25-50%.

Women with extragenital pathology are a risk group for health loss, pregnancy loss, increased frequency of pathological births and surgical interventions during childbirth and the postpartum period. They constitute a significant reserve for reducing perinatal losses, as well as maternal mortality.

When counseling women with extragenital pathology, it is necessary to proceed first of all from the fact that this is a woman who needs reliable and safe contraception.

At the same time, when choosing a method of contraception, it is necessary to take into account the features of the disease that the woman suffers from, the amount of drug therapy for the main disease, and also evaluate the possible effects of the method of contraception on the manifestations of the disease. When choosing a method of contraception, it is assumed that it should be effective and convenient for a woman to use, and the possible risk of complications should be minimized. One of the important conditions for the use of these methods of contraception is the possibility of long-term use, the availability of the method.

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

2.1. Knowledge requirements:

- communication and clinical patient examination skills;
- the ability to determine the list of necessary clinical and laboratory and instrumental studies and evaluate their results;
- the ability to consult on the appointment of modern methods of contraception for extragenital pathology, HIV.

List of didactic units:

- consultation with the prescribing of contraception for women with arterial hypertension; coronary heart disease, with damaged heart valves;
- consultation with the prescribing of contraception for women with diseases of the liver and gall bladder (viral hepatitis, cholestasis, gallstone disease);
- counseling with the prescribing of contraception for women with the disturbed thyroid gland
- consultation with the prescribing of contraception for women with diabetes;
- consultation with the prescribing of contraception for women with deep vein thrombosis, varicose veins;
- consultation with the prescribing of contraception for women with HIV;
- medical criteria for the acceptability of the use of contraceptive methods (WHO);
- classification of categories of use of contraceptive methods depending on the state of health I am a woman (WHO);
- assessment of the patient;
- an examination is necessary, which is carried out in a planned manner before making a decision on the use of various methods of contraception.

2.2. Questions (test tasks, tasks, clinical situations) to check basic knowledge on the topic of the practical lesson.

Typical situational tasks:

1. A woman D., who had an artificial abortion 5 days ago, turned to the doctor of the women's consultation. Blood pressure 120/70, pulse 78 bpm. Before

pregnancy, the woman used a barrier method of pregnancy prevention, there were no complications, she wants a more reliable method of contraception. It is known from the anamnesis that she suffers from gallstone disease with frequent periods of exacerbation. The doctor recommended that the woman start using COCs after her next menstruation.

Task: Evaluate the correctness of the doctor's recommendations.

Answer: The doctor's recommendations are not correct.

2. The doctor of the women's consultation consulted the patient V. about changing the method of contraception. The patient is 26 years old, has been using IUD for 4 years, among extragenital diseases is anemia of the 1st degree. The doctor of the women's consultation recommended removing the IUD, considering the presence of anemia, and starting the use of COCs.

Task: Assess the correctness of the doctor's recommendations.

Answer: The doctor's recommendation is correct.

Typical test tasks:

1. When counseling patients with diabetes, what types of contraception can be used, except:

- a. IUD with copper
- b. Barrier methods
- c. Hormonal contraception
- d. Voluntary surgical sterilization
- e. The method of lactational amenorrhea

2. Women with arterial hypertension are contraindicated:

- a. Barrier methods
- b. COCs
- c. Copper-containing IUD
- d. Voluntary surgical sterilization
- e. Calendar method

3. What contraceptives can cause arterial thrombosis in hypertension?

- a. Spermicides
- b. COCs
- c. Copper-containing IUD
- d. Condoms
- e. Intrauterine device with levonorgestrel

4. Women suffering from damage to the heart valves should not be prescribed:

- a. Barrier methods.
- b. IUD with copper.
- c. The method of lactational amenorrhea.
- d. Hormonal methods
- e. Voluntary surgical sterilization

5. Women with liver disease should not be prescribed:

- a. COCs
- b. Barrier methods.
- c. Voluntary surgical sterilization
- d. Natural methods of family planning
- e. The method of lactational amenorrhea.

6. Women with coronary heart disease can be prescribed contraceptive methods, except for:

- a. IUD with copper
- b. Natural methods of family planning
- c. Voluntary surgical sterilization
- d. Barrier methods
- e. Hormonal methods of contraception

7. Women with varicose veins, deep vein thrombosis should not be prescribed:

- a. Barrier methods
- b. The method of lactational amenorrhea.
- c. Hormonal methods of contraception
- d. Calendar method
- e. IUD with copper

Correct answers: 1-c, 2-b, 3-b, 4-d, 5-a, 6-e, 7-c.

Interactive task:

The students of the group are divided into 3 subgroups of 4-5 people each. We work in women's consultation rooms with gynecological patients, we give tasks:

I subgroup - collection of anamnesis, assessment of the patient

II subgroup - counseling of a patient with extragenital pathology, HIV on family planning, selection of a contraceptive method

Subgroup III – evaluates the correctness of the answer of subgroups I and II and makes its corrections.

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

3.1. Content of tasks (tasks, clinical situations, etc.).

Unusual situational tasks:

1. HIV-positive woman, 34 years old. The duration of HIV disease is 8 years. There are 2 births by caesarean section in the anamnesis. Children are healthy. After the last delivery, she receives ART for 2 years. The last time the viral load was determined 3 months ago - 2000 copies/μl. She had pneumonia 6 months ago. During the examination, oral and vaginal candidiasis is noted. She complains of

nausea, sometimes vomiting and heavy menstruation for the last six months. I came to consult about the method of contraception.

Task: What method of contraception is most acceptable for a woman?

Answer: The most acceptable method is a condom.

2. The doctor of the women's consultation consulted the patient K. regarding the choice of a method of contraception. The patient is 33 years old, the menstrual cycle is not regular, height 162 cm, weight 65 kg, blood pressure 145/90, does not smoke, does not drink alcohol, extragenital diseases - vegetative-vascular dystonia of the hypertensive type. The doctor of the women's consultation recommended the use of COCs to the woman in connection with an irregular menstrual cycle.

Task: 1. Assess the correctness of the doctor's recommendations.

2. What side effects can occur when using this method of contraception?

Answer: 1. The doctor's recommendations are incorrect.

2. Amenorrhea, nausea/dizziness/vomiting, irregular bleeding, smearing discharge, increased blood pressure ($\geq 149/90$), headache, mood swings or libido disorders.

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

CLASSIFICATION OF CATEGORIES OF THE USE OF CONTRACEPTION METHODS DEPENDING ON THE STATE OF HEALTH OF A WOMAN (WHO, 2009)

According to this classification, various methods of contraception are evaluated in terms of the health risk-benefit ratio of their use in the presence of certain conditions.

Concept "**state**" is defined as a reflection of the individual characteristics of a woman (for example, age or reproductive history) and established somatic diseases.

Conditions that affect the permissibility of using each individual method of contraception belong to one of the following categories:

Categories

1– a condition for which there are no contraindications to the use of this method of contraception;

2– a state in which the expected benefit from using this method of contraception generally exceeds the proven or theoretical risks;

3– a condition in which the proven or theoretical risks generally exceed the expected benefits of using this method of contraception;

4– a condition in which the use of this method of contraception is absolutely contraindicated.

The meaning of categories "1" and "4" does not require explanation.

Category "2" means that this method of contraception is allowed to be used, but careful monitoring by a doctor is necessary.

Category "3" means that this method is not recommended except in situations where more suitable contraceptives are not available or their use is unacceptable to the patient. The method can be recommended only after a thorough clinical examination, taking into account the severity of the condition and the acceptability of alternative methods of contraception, and on the condition that there is access to appropriate medical services. The patient's state of health must be under the special control of a doctor.

By conditions of the impossibility of conducting a clinical examination in the appropriate volume, the woman's condition belongs to the category "3" means that the use of this method of contraception by this woman is unacceptable.

An examination is necessary, which is carried out in a planned manner before making a decision in favor of one or another method of contraception (class A, B, C).

Class "A"- conducting this examination/analysis is definitely recommended in all cases and is a guarantee of safety and effectiveness of using a specific method of contraception.

Class "B"- carrying out this examination/analysis largely ensures the safety and effectiveness of using a specific method of contraception.

Class "C"- carrying out this examination or analysis does not provide any significant guarantee of safety and effectiveness of a particular method of contraception.

Kind	C O C s	E C	P O I C s	I U D	C o n d o m s	C e r v i c a l c a p s	Con trac epti ves for loca l use	Fe m a l e s t e r i l i z a t i o n	Vasec tomy
Examination of mammary glands	C	C	C	C	C	C	C	C	Not held
Examination of the pelvic/genital organs	C	C	C	A	C	A	C	A	A

Cervical pathology screening	C	C	C	C	C	C	C	C	Not held
Standard laboratory examination	C	C	C	C	C	C	C	C	C
Determination of the level of hemoglobin in the blood	C	C	C	B	C	C	C	B	C
STD risk assessment: history taking and general examination	C	C	C	A*	C*	C**	C**	C**	C
Screening for STIs/HIV: laboratory examination	C	C	C	B*	C*	C**	C**	C**	C
Measurement of blood pressure	***	***	***	C	C	C	C	A	C****

*If a woman is at high risk of infection with gonorrheal or chlamydial infection, in this case, the introduction of the IUD is not recommended, except in circumstances where it is impossible or unacceptable to use alternative methods of contraception for one reason or another.

**Women at high risk of HIV infection should not use spermicides that contain nonoxynol-9.

***Blood pressure measurement is recommended before starting the use of COC, emergency contraception (EC).

****Procedures performed using local anesthesia.

Contraception in the most common extragenital diseases

Features of contraception in women with liver and gall bladder disease (viral hepatitis, cholestasis, gallstone disease)

- COCs can cause an increase in the risk and course of diseases of the gallbladder and liver;
- the hormonal skin patch and vaginal ring may cause a slight increase in the risk of gallbladder disease and worsen the condition of current gallbladder disease;
- with cirrhosis of the liver: estrogens and progestogens are metabolized in the liver, so their use may adversely affect the condition of women;
- barrier methods of contraception, IUD, voluntary surgical sterilization can be used without restrictions.

Features of contraception in women with thyroid dysfunction (simple goiter, hyperthyroidism, hypothyroidism)

- With such violations, the use of any methods of contraception is not limited, it is possible to use hormonal methods, barrier methods, IUDs, voluntary surgical sterilization.

Features of contraception in women with diabetes

- when using COCs, the main concerns are related to vascular diseases accompanying diabetes and the additional risk of arterial thrombosis;
- the use of an intrauterine system containing copper does not increase the risk of infectious complications;
- during surgical sterilization, the risk of developing surgical complications, anesthesia, and wound healing increases.

Peculiarities of contraception in women with lesions of the heart valves

- women need to take long-term drugs that reduce blood coagulation, the use of COCs can further increase the risk of arterial thrombosis.
- women with complicated heart lesions are at the greatest risk of using hormonal contraception;
- there is a danger of infection of the urinary tract when using female condoms, diaphragms, which is an increased risk for women suffering from subacute bacterial endocarditis.
- barrier methods of contraception (male condoms, spermicides), IUDs containing copper and voluntary surgical sterilization can be used without restrictions.

Peculiarities of contraception in women with coronary heart disease

- it is worth avoiding the increased risk associated with the use of COCs and other hormonal methods;
- surgical sterilization has practically no contraindications, but there is an increased risk of developing complications associated with anesthesia and direct surgical intervention;
- barrier methods of contraception and IUDs containing copper have no restrictions on their use.

Features of contraception in women with arterial hypertension

- women with hypertension should avoid the increased risk of arterial thrombosis associated with the use of hormonal methods;
- when using an intrauterine system with levonorgestrel for these women, the influence of levonorgestrel on the lipid spectrum of the blood is theoretically not excluded;
- there are no restrictions for copper-containing IUD and barrier methods. However, they are less reliable, which should be considered in particularly difficult cases;

- the method of surgical sterilization is limited only in connection with its irreversibility.

Features of contraception in women with superficial thrombosis, deep vein thrombosis, varicose veins

- the possible development of hypercoagulation limits the use of hormonal methods in such women;
- a detailed anamnesis deserves special attention, some conditions that increase the risk of thromboembolic complications are hereditary;
- barrier methods of contraception, IUD or voluntary surgical sterilization can be used without special restrictions

Peculiarities of contraception in women with HIV

- with an unplanned and unwanted pregnancy, the risk of HIV transmission from mother to child increases;
- termination of pregnancy increases the risk to a woman's health;
- when choosing a method, one should take into account the advantages for a woman, concomitant diseases and the use of antiretroviral therapy;
- special attention during counseling should be given to STI/HIV issues;
- since condoms are the only method of contraception that has been proven to protect against the transmission of STIs/HIV, during counseling it is necessary to recommend regular and correct use of condoms;
- for women taking antiretroviral therapy, the use of hormonal contraception is possible, it does not affect the safety and effectiveness of ART, however, the effectiveness of some hormonal contraceptives (especially estrogen-containing) is reduced against the background of ART. A number of ART drugs (nevirapine, protease inhibitors) moderately reduce the level of estrogens in the blood and increase the level of progestogens;
- natural methods are characterized by a high failure rate compared to other methods of contraception, so they should not be used by HIV-positive women;
- the method of lactational amenorrhea is not recommended, it should be recommended to exclude breastfeeding as a risk factor for HIV transmission from mother to newborn;
- there are no contraindications for voluntary surgical sterilization in women with early stages of HIV infection, with late stages, surgical intervention may be associated with an increased risk of infectious complications, so the issue is decided individually.

3.3. Discussion of theoretical issues

Question:

- Methods of contraception for women with arterial hypertension; coronary heart disease, with damage to the heart valves;

- Methods of contraception for women with diseases of the liver and gall bladder (viral hepatitis, cholestasis, gallstone disease);
- Methods of contraception for women with disorders of the function of the thyroid gland;
- Methods of contraception for women with diabetes;
- Methods of contraception for women with deep vein thrombosis, varicose veins;
- Methods of contraception for women with HIV;
- Medical criteria for the acceptability of using contraceptive methods (WHO);
- An examination is necessary, which is carried out in a planned manner before making a decision on the use of contraception in women with extragenital pathology, HIV.

3.4. Control materials for the final stage of the lesson: problems, assignments, tests, etc.

Non-typical test tasks:

1. Patient Z. turned to the doctor of the women's consultation regarding the selection of an effective method of contraception. The woman is 35 years old, with a history of 1 childbirth, 2 induced abortions. A woman wants to use COC. From the anamnesis, it was found that she suffers from hypertension and had symptoms of preeclampsia during pregnancy. Can COC be recommended to a woman?
 - a. Yes
 - b. No
 - c. After additional examination
 - d. After determining the woman's pressure
 - e. At any moment, at the request of the woman

2. A 35-year-old woman, who has given birth twice, came to see a doctor. He has a history of constant migraines, has thrombophlebitis of the right lower limb. What method of contraception cannot be used in this case?
 - a. Voluntary surgical sterilization.
 - b. IUD
 - c. Condoms
 - d. COCs
 - e. Spermicides

3. A 34-year-old HIV-positive woman consulted a doctor for a woman's consultation regarding the selection of a contraceptive method, had a history of 1 childbirth, 5 years ago, is taking antiretroviral therapy, and has further reproductive intentions. Which method is most appropriate in this case?
 - a. Natural methods.
 - b. Voluntary surgical sterilization

- c. Hormonal contraception
- d. Barrier method (condom)
- e. Spermicides

Correct answers: 1 – b; 2 –d; 3 -d.

Test tasks KROK-2:

1. (2019) A 32-year-old woman turned to a gynecologist with complaints of chronic pelvic pain that worsens during menstruation, dyspareunia, bleeding before and after menstruation. Last period 3 weeks later. When examined in speculum: on the cervix, there are 2 cysts with a diameter of 3 and 5 mm, blue-purple in color, from which a dark brown liquid is released. During bimanual examination: the body of the uterus is spherical in shape, enlarged up to 6 weeks of pregnancy, painful during palpation. Appendages on both sides without features. The doctor was informed that the birth of a child is not planned in the near future. What is the most appropriate treatment strategy for this patient?

- A. Controlled ovarian hyperstimulation
- B. Prescribing combined oral contraceptives*
- C. Prescribing androgens
- D. Surgical intervention
- E. Prescribing gonadotropin-releasing hormone antagonists

2. (2008) A 26-year-old woman who gave birth 7 months ago has been troubled by nausea, vomiting in the morning, and drowsiness for the past two weeks. She is breastfeeding, there was no menstruation. She was not warned against pregnancy. Which of the methods should be used to clarify the diagnosis?

- A. Ultrasound examination*
- B. Ro-graphy of the pelvic organs
- C. Palpation of the mammary glands and milk ejection
- D. Two-handed vaginal examination
- E. Speculum examination

5. Topics of reports/abstracts:

- Methods of contraception in women with arterial hypertension
- Peculiarities of prescribing contraception in women with coronary heart disease
- Methods of contraception in women with diseases of the liver and gall bladder
- Methods of contraception in women with thyroid dysfunction.
- Peculiarities of contraception in women with diabetes.
- Methods of contraception in women with damage to heart valves.
- Peculiarities of contraception in women with varicose veins, deep vein thrombosis.
- Peculiarities of prescribing contraception in women with HIV

4. Summary(criteria for evaluating learning outcomes).

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

Final control:test.

Evaluation of the current educational activity at the practical lessons:

1. Evaluation of theoretical knowledge on the subject of the lesson:

- methods: survey, solving a situational clinical problem

- maximum score – 5, minimum score – 3, unsatisfactory score – 2.

2. Assessment of work with patients on the subject of the lesson:

- methods: assessment of: a) communicative skills of communication with the patient; b) the correctness of prescribing and evaluating laboratory and instrumental studies before using a contraceptive in women with extragenital pathology and HIV;

c) the ability to provide family planning counseling for women with extragenital pathology and HIV;

d) the ability to select the correct individual method of contraception in women with extragenital pathology and HIV.

- maximum score – 5, minimum score – 3, unsatisfactory score – 2.

The grade for one practical lesson is the arithmetic average of all components and can only have a whole value (5, 4, 3, 2), which is rounded according to the statistical method.

Current assessment criteria at the practical lesson

Rating	Evaluation criteria
"5"	The student is fluent in the material, takes an active part in discussing and solving a situational clinical problem, confidently demonstrates the skills of counseling on family planning and the correct appointment of laboratory and instrumental studies before using a contraceptive, expresses his opinion on the subject of the class, demonstrates clinical thinking.
"4"	The student has a good command of the material, participates in the discussion and solution of a situational clinical problem, demonstrates the skills of family planning counseling and the correct appointment of laboratory and instrumental studies before using a contraceptive with some errors, expresses his opinion on the topic of the class, demonstrates clinical thinking.
"3"	The student does not have sufficient knowledge of the material, is unsure of participating in the discussion and solution of the situational clinical problem, demonstrates the skills of family planning counseling and the correct appointment of laboratory and instrumental studies before using a contraceptive with significant errors.
"2"	The student does not possess the material, does not participate in the discussion and solution of the situational clinical problem, does not demonstrate the skills of counseling on family planning and the correct

appointment of laboratory and instrumental studies before using a contraceptive.
--

5. List of recommended literature.

Basic

1. Obstetrics and gynecology: in 2 books. – Book 2. Gynecology: a textbook (III-IV university) / edited by V.I. Hryshchenko, M.O. Shcherbiny - 3rd ed., edition, 2020. – 376 p
2. Clinical Obstetrics and Gynaecology: 4th Edition / Brian A. Magowan, Philip Owen, Andrew Thomson. - 2021. - 454 p.
3. Medical acceptance criteria for the use of contraceptive methods: 5th edition. Methodical recommendations.-Geneva: World Health Organization; 2015
4. Family planning and contraception: study guide / V.I. Boyko, N.V. Kalashnyk, A.V. Boyko and others; in general ed. Dr. Med. Sciences, Prof. V.I. A fight – Sumy: Sumy State University, 2018. – 223 p.
5. Oats, JeremyFundamentals of Obstetrics and Gynaecology [Text]: Liewellyn-JonesFundamentals of Obstetrics and Gynaecology / J.Oats, S.Abraham. - 10th ed. – Edinburgh [etc.]: Elsevier, 2017. – VII, 375 p.
6. Dutta, Durlav Chandra. DC Dutta's Textbook of Gynecology including Contraception / DC Dutta; ed/ Hiralal Konar. - 7th. ed. - New Delhi: Jaypee Brothers Medical Publishers, 2016. - XX, 574 p.

Additional:

1. Gynecology: a guide for doctors./ V.K. Likhachev. – Vinnytsia: Nova Kniga, 2018. - 688 p.
2. Family Planning: A Universal Guide for Family Planning Providers. Updated 3rd edition 2018. Copenhagen: WHO Regional Office for Europe; 2021
3. Situational problems in gynecology: study guide. / I.Z. Gladchuk, A.G. Volyanska, G.B. Shcherbyna, etc.; under the editorship Prof. I.Z. Gladchuk. - Vinnytsia: "Nilan-LTD" LLC, 2018.-164 p.
4. Lopez LM, Grimes DA, Schulz KF. Steroidal contraceptives: effect on carbohydrate metabolism in women without diabetes mellitus. Cochrane Database Syst Rev. 2019 Nov 12; 2019(11).
5. Plu-Bureau G, Sabbagh E, Hugon-Rodin J. Hormonal contraception and vascular risk: CNGOF Contraception Guidelines. Gynecol Obstet Fertil Senol. 2018 Dec;46(12):823-833.
6. Diagnostics of obstetric and gynecological endocrine pathology: [educational manual for intern doctors and trainee doctors of institutions (fac.) post-diploma. of 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.
7. Zaporozhian V.M. Simulation medicine. Experience. Acquisition Prospects: practice. advisor / V.M. Zaporozhian, O.O. Tarabrin – Sumy: University. Book, 2018. – 240 p.

8. Infertility and benign diseases of the mammary gland / National Academy of Sciences of Ukraine, Ministry of Health of Ukraine, Institute of Pediatrics, Obstetrics and Gynecology, UMSA; under the editorship A.G. Kornatska, T.F. Tatarchuk, O.D. Dubenko. – K.; Poltava, 2017. – 271 p.
9. Reproductive function in women with uterine fibroids and endometriosis / N.M. Rozhkovska, D.M. Zhelezov, T.V. Kossei // Women's health - 2018. - #2. - P.5-7.
10. Ovarian reserve during surgical treatment of ovarian endometrioma / A.H. Volyanska, L.M. Popova, T.P. Todorova, O.P. Rogachevskyi, O.I. Shevchenko // All-Ukrainian scientific and practical conference with international participation "Innovative technologies in obstetrics and gynecology: from science to practice" - Ivano-Frankivsk, 2019. - P. 12-13.
11. The influence of surgical energies on the ovarian reserve during endoscopic treatment of ovarian endometriosis / T.P. Todorova // Scientific and practical conference with international participation dedicated to the 150th anniversary of the birth of V.V. Voronov "Modern theoretical and practical aspects of clinical medicine" - Odessa, 2020. - p. 118.
12. Current "Clinical protocols", approved by order of the Ministry of Health of Ukraine for Obstetrics and Gynecology.

Internet sources for preparation:

1. <https://www.cochrane.org/>
2. <https://www.ebcog.org/>
3. <https://www.acog.org/>
4. <https://www.uptodate.com>
5. <https://online.lexi.com/>
6. <https://www.ncbi.nlm.nih.gov/>
7. <https://pubmed.ncbi.nlm.nih.gov/>
8. <https://www.thelancet.com/>
9. <https://www.rcog.org.uk/>
10. <https://www.npwh.org/>