

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

Faculty of international

Department of Obstetrics and Gynecology

 **APPROVED**
Vice-rector for scientific and pedagogical work
Eduard BURIACHKIVSKYI
"29" August 2024

**METHODICAL DEVELOPMENT FOR PRACTICAL LESSONS
FROM EDUCATIONAL DISCIPLINE**

Faculty of international, course IV

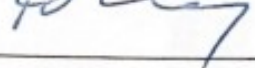
Educational discipline "Obstetrics and gynecology"

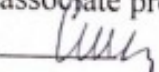
Practical lesson № 9. Topic: «Infertility marriage»

Approved:

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

Protocol №1 dated August 29, 2024.

Head of the department  (Ihor GLADCHUK)

Developer: associate professor of the department of Obstetrics and Gynecology  Stepanovichus O.M.

Practical lesson №9

Topic: " Infertile marriage"

Objective: teach to evaluate a patient with infertility. Master the plan of examination of a patient with infertility. Master the skills of examination and treatment of patients with infertility.

Basic concepts: Counseling on infertility in a couple. Study of the causes of female and male infertility. Patient assessment. A routine examination is needed to identify the causes of female infertility. Recommendations for the treatment of infertility in a married couple.

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

Study time: 4 hours.

1. Organizational activities (greetings, checking the audience, announcing the topic, the purpose of the lesson, motivating students to study the topic). Because of worsening of demographic setting in Ukraine, increased frequency of infertility marriages (rises up to 15-20% from all marriages), problem of treating damages of reproductive function became very actual. Combination of many etiologic factors which lead to infertility often does not give an opportunity to reveal main and secondary causes of the problem and set adequate treatment. During last few years main methodic for treating infertility stays endoscopy.

2. Control of basic knowledge (written work, written testing, online testing, face-to-face interview, etc.).

2.1. Requirements for theoretical readiness of students to perform practical classes.

Knowledge requirements:

- communication skills and clinical examination of the patient;
- ability to determine the list of necessary clinical, laboratory and instrumental studies and evaluate their results;
- ability to establish a preliminary and clinical diagnosis of the disease;
- ability to perform medical manipulations;
- ability to provide counseling on infertility treatment; ;
- ability to keep medical records.

List of didactic units:

- collect information about the general condition of the patient (consciousness constitution) and exterior (examination of the skin, subcutaneous fat layer, palpation of lymph nodes, thyroid and mammary glands);
- examine the cardiovascular system (inspection and palpation of the surface area of the heart and blood vessels, determining the limits of percussion of the heart and blood vessels, auscultation of the heart and blood vessels);

- examine the condition of the respiratory (chest examination and upper respiratory tract, chest palpation, percussion and auscultation of the lungs);
- examine the state of the abdomen (abdominal examination, palpation, percussion and intestines, stomach, liver, spleen, palpation of the pancreas, kidney, pelvic, rectal finger study);
- examine the state of the musculoskeletal system (inspection and palpation);
- examine the condition of the nervous system;

examine the state of the genitourinary system.

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

Determine and classify main etiological and pathogenic factors of infertility;

Make examination plan and analyze data of laboratory and instrumental tests in infertility.

Determine management tactics in infertility;

Rate laboratory, cytological, radiological, methods of examination, ultrasound.

Make a plan of examination of patients with suspected pipe genesis infertility

Choose from the history data that indicate the cause of infertility.

To review the cervix in the mirrors, and vaginal examination put the preliminary diagnosis.

Make a plan endocrine infertility treatment, depending on its origin.

Interpret the results of semen.

Typical situational tasks:

1. Patient, 20 years old, addressed women's health clinic with complaints on menstruations delay for 10 days. From anamnesis: no disorders of menstrual cycle previously. Sexual life is regular, she doesn't use contraceptives. On examination: general condition is satisfactory, BP - 120/80mm Hg, pulse - 72 bpm. Abdomen is soft, painless on palpation. The symptoms of peritoneum irritation are negative. What diagnosis should be made?

Reply: Primary infertility. Polycystic ovary syndrome.

2. Woman, 32 years old, visited family doctor with complaints of infertility. She has regular sexual life without contraception for 7 years.

From anamnesis: chronic bilateral adnexitis for 5 years, for which she was treated in hospital and ambulatory services. She has no history of previous pregnancies. Menstruations started at the age of 13, usually regular, but for the last 2 years it is irregular. On speculum examination: cervical epithelium is intact. On bimanual examination: limited mobility of the uterus was revealed. Husband's spermogram: asthenospermia- and oligozoospermia of II degree. What diagnosis should be made?

Reply: Primary infertility. Connective process of the pelvic organs. Male infertility (asthenospermia- and oligozoospermia of II degree).

Typical test tasks:

1. Female 26 years has addressed with complaints of infertility for 3 years. Menstruation in 14 years, painless, moderate. Cycle 4.5 / 28 regular. At the age of 16 underwent appendectomy. Postcoital test and analysis of sperm in the normal range. According to the measurement of basal body temperature ovulatory cycles, luteinova phase is 12-14 days. Define the most appropriate method of diagnosis:

A. Laparoscopy and hromosalpinhoskopiya.

B. hysteroscopy.

C. colposcopy.

D. endometrial biopsy.

E. hysterosalpingography.

2. Before she turned gynecologist '28 complaining of infertility. Married 6 years, first pregnancy was the first year of marriage and ended in induced abortion, which uskladnylsya inflammation of the uterus. Menstrual disorders are not celebrating. More pregnancies were not. What the survey should be conducted?

A. Spermohramu.

B. metrosalpingography.

C. functional diagnostic tests.

D. determination of hormone levels on cycle day 7-8.

E. bacteriological study of discharge from the genital tract.

Correct answers: 1 - A; 2 - B.

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

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

Interactive task:

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:

And the subgroup - to make a preliminary diagnosis.

Subgroup II - to make a plan for the management of a gynecological patient.

Subgroup III - assesses the correctness of the answer of subgroups I and II and makes adjustments.

Atypical situational task:

Patient, 29 years old, has arrived at gynecological department with complaints on infertility during 5 years, general weakness, sweating, increase of body temperature up to 37,2°C, pain in the lower abdomen.

From anamnesis: tonsillectomy at the age of 18. She had a contact at work with a person infected with tuberculosis. Menstruations since 13 years old (for 5-6 days, cycle interval - 28 days), regular, moderate, painless. During the last 3 years, menstruations duration became 5-10 days. She had no pregnancies, doesn't use contraceptives.

Objectively: general condition is satisfactory. Temperature - 37,0°C, pulse - 78 beats/min, of satisfactory properties. Skin and visible mucous membranes are pale. Patient is of normosthenic constitution with malnutrition. Abdomen is soft and painless on palpation.

Examination in specula: mucous of vagina is pink, cervix of uterus is conic, os is closed, and discharge is light. Bimanual examination: vagina of nullipara. Cervix and body of uterus are normal, their shift is painless. In the area of uterine appendages on both sides are defined dense formations. Vaginal vaults are deep and painless. The preliminary diagnosis: chronic bilateral salpingitis (specific etiology?). Primary infertility.

Microbiological examination: in analysis of microflora of vagina, cervical canal and urethra – leucocytes and mixed microflora. Metrosalpingography: fallopian tubes are impassable, of various shape on X-ray.

What are the doctor's tactics?

Reply: Send the patient for further examination and treatment in an anti-tuberculosis hospital.

Atypical test tasks:

1. A woman complains of irregular menstrual cycle for 2 years. The duration of the menstrual cycle of 30-50 days. During the year there were no pregnancies. What research should be assigned primarily to clarify the causes of infertility?

- A. Laparoscopy.
- B. semen sex partner.
- C. Measurement of basal temperature.
- D. postcoital test.
- E. Hysteroscopy.

2. Patient 29 years, a history of three pregnancies, frozen, for the last 3 years has not vahitnyuye.

What should be assigned to identify the causes of this disease?

- A. bacteriological study of discharge from the genital tract.
- B. Testing for syphilis.

C. Screening for tuberculosis.

D. Clinical analysis of blood.

E. Screening for TORCH-infection, medical and genetic counseling.

Correct answers: 1 - C, 2 - E.

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

Causes of female infertility	laboratory methods of examination of women with infertility
Tubal infertility	blood type, Rh factor
Tuboperitoneal infertility	general blood analysis
Endocrine infertility	tested for HIV, Hbs-Ag (Hepatitis B), HCab (hepatitis C), RW discs (syphilis)
Infertility associated with endometriosis.	antibodies to rubella, toxoplasmosis antibodies (the latter two need to take only a woman);
	test for gonorrhea and chlamydia, mycoplasma, ureaplasma;
	cervical cytology.
Instrumental methods of examination of women with infertility	<p>Gisterosonografiya - a holding transvaginal ultrasound with simultaneous introduction of a small amount of sterile fluid into the uterus. If the fallopian tubes are passable, it can be seen on ultrasound as the liquid is poured behind the uterus. Sami fallopian tubes in most cases are not visible on ultrasound. The method is practically painless and requires no special training.</p> <ul style="list-style-type: none">• Hysterosalpingography - an introduction to the uterus of contrast material and then performing a series of X-rays. If the pipes are passable, contrast freely poured into the abdominal cavity, and this is clearly seen in the photographs.• Laparoscopy. The uterus is introduced sterile liquid color is blue, and the surgeon directly assesses the eye, the

	fluid fills and pours the fallopian tubes into the abdominal cavity. Existing barriers to exit of fluid from the pipe, if possible, can be immediately eliminated.
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Algorithm for performing practical skills.

Bimanual (vaginal) examination:

- 1) greet the patient;
- 2) identify the patient (name, age);
- 3) to inform the patient about the need for research;
- 4) explain to the patient how the study is conducted;
- 5) obtain permission to conduct research;
- 6) wash your hands;
 - 1) wear inspection gloves;
 - 2) with the first and second fingers of the left (right) hand to spread the labia majora, the middle finger of the "dominant" hand to place at the level of the posterior adhesion, gently press on it to open the entrance to the vagina;
 - 3) carefully and slowly insert the middle finger, then the index finger into the vagina along the posterior wall to the vault and cervix, bring the fourth and fifth fingers to the palm, the thumb to the top;
 - 4) determine the length of the vaginal part of the cervix in centimeters;
 - 5) determine the consistency of the cervix (dense, soft);
 - 6) determine the patency of the outer eye of the cervical canal (closed, passes the fingertip);
- 7) assess the pain of the cervical tour;
 - 8) carefully place the second palm on the abdomen (above the symphysis) and press moderately to determine the bottom of the uterine body;
 - 9) bring the body of the uterus between two hands and determine:
 - position of the uterus relative to the cervix (anteflexio, retroflexio);
 - body size of the uterus (normal, reduced, enlarged);
 - consistency of the uterine body (dense-elastic, soft, compacted);
 - motility of the uterine body (relatively mobile, limited mobility);
 - sensitivity to palpation (painful, painless);

- 10) place the fingers in the bottom of the right lateral arch and using both hands to palpate the right vaginal arch and the right appendages of the uterus, determine their size, mobility and pain;
- 11) place the fingers in the bottom of the left lateral arch and using both hands to palpate the left vaginal arch and the left appendages of the uterus, determine their size, mobility and pain;
- 12) determine the capacity of the vaginal vaults;
- 13) inform the patient about the results of the study;
- 14) thank the patient;
- 15) remove inspection gloves;
- 16) wash your hands.

Clinical examination of the mammary glands:

- 1) greet the patient;
 - 2) identify the patient (name, age);
 - 3) to inform the patient about the need for research;
 - 4) explain to the patient how the study is conducted;
 - 5) obtain permission to conduct research;
 - 6) wash your hands;
 - 7) wear inspection gloves;
 - 8) examine the mammary glands, assess their shape, skin color, nipples, areas around the nipple (asymmetry, retraction, etc.);
- 1) examine the tissue of the mammary glands clockwise or in quadrants and determine its density, homogeneity, sensitivity, presence / absence of bulky tumors;
 - 2) at detection of a new growth to define its form, the sizes, a consistence, borders of formation, mobility, a parity with fabric of a mammary gland, morbidity;
 - 3) palpation of lymph nodes in the supraclavicular, subclavian and axillary areas;
 - 4) determine the presence of pathological secretions from the mammary glands;
 - 5) inform the patient about the results of the study;
 - 6) thank the patient;
 - 7) remove inspection gloves;
 - 8) wash your hands.

3.3. Requirements for the results of work, including before registration.

- Advise women on infertility.
- Evaluate the patient.

- Choose methods of diagnosis and treatment of infertile women depending on the cause.
- Analysis and discussion of the results of the patient's examination.
- Multimedia presentation on the topic of the lesson (review of literature using modern sources; videos, etc.).

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

Atypical situational task:

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Microbiological examination: in analysis of microflora of vagina, cervical canal and urethra – leucocytes and mixed microflora. Metrosalpingography: fallopian tubes are impassable, of various shape on X-ray.

What is the doctor's advice in this case?

Reply: After undergoing treatment in a TB hospital to perform in vitro fertilization.

Test tasks STEP-2:

1. (2019) Female 25 years appealed to the antenatal clinic with complaints of non-occurrence of pregnancy. Married 1 year, living a regular sexual life, contraception does not use. From history we know that once treated in the gynecological department with the exacerbation of chronic adnexitis. Diagnosis?

- A. Secondary infertility.
- B. Chronic adnexitis.

+ C. Primary infertility.

D. Apoplexy ovary.

2. (2008) The patient gynecology department arrived 28 years with complaints of infertility for 2 years. From the history of 3 abortions, menstrual cycle was normal. The man was examined - spermogram normal.

What research is followed to appoint the first?

+ A. metrosalpingography.

B. laparoscopy.

C. Stimulation of ovulation.

D. Rate hidrotubatsyy.

E. insemination by sperm donor.

4. Summing up (criteria for evaluating learning outcomes).

Current control: oral examination, testing, assessment of practical skills, solving situational clinical problems, assessment of activity in the classroom, etc.

- ***The structure of the current assessment in the practical lesson:***

- 1. Assessment of theoretical knowledge on the topic of the lesson:

- - methods: survey, solution of situational clinical problem;

- - maximum grade - 5, minimum grade - 3, unsatisfactory grade - 2.

- 2. Assessment of practical skills and manipulations on the topic of the lesson:

- - methods: assessment of the correctness of practical skills;

- - maximum grade - 5, minimum grade - 3, unsatisfactory grade - 2

1. Evaluation of work with the patient on the topic of the lesson:

- methods: assessment of: a) communication skills of communication with the patient, b) the correctness of the appointment and evaluation of laboratory and instrumental studies, c) compliance with the algorithm for differential diagnosis d) justification of clinical diagnosis, e) treatment plan;

- maximum grade - 5, minimum grade - 3, unsatisfactory grade - 2.

Criteria for current assessment in the practical lesson:

«5»	The student is fluent in the material, takes an active part in the discussion and solution of the situational clinical problem, confidently demonstrates practical skills during the examination of the patient and the interpretation of clinical, laboratory and instrumental studies, expresses his opinion on the topic of the lesson, demonstrates clinical
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	thinking.
«4»	The student is well versed in the material, participates in the discussion and solution of situational clinical problems, demonstrates practical skills during the examination of the patient and interpretation of clinical, laboratory and instrumental studies with some errors, expresses his opinion on the topic, demonstrates clinical thinking.
«3»	The student does not have enough material, insecurely participates in the discussion and solution of the situational clinical problem, demonstrates practical skills during the examination of the patient and interpretation of clinical, laboratory and instrumental studies with significant errors.
«2»	The student does not have the material, does not participate in the discussion and solution of the situational clinical problem, does not demonstrate practical skills during the examination of the patient and the interpretation of clinical, laboratory and instrumental studies.

LIST OF RECOMMENDED TRAINING AND METHODOLOGICAL LITERATURE

IN OBSTETRICS AND GYNECOLOGY

1. Basic

1. Gynecology: a textbook (edited by BM Ventskivsky, GK Stepankovskaya, ME Yarotsky) .- K .: VSV Medicine, 2012.- 352 p.
2. Zaporozhan VM, Chaika VK, Markin LB Obstetrics and Gynecology (in 4 volumes): national textbook: 2013
3. Gynecology: a textbook in English (edit by I.B. Ventskivska) .- K .: Medicine, 2010.-160 p.
4. Zaporozhan VM Operative gynecology: a textbook. - Odessa: Odessa Medical University, 2006. - 292 p.
5. Methods of contraception according to periods of life: a textbook.- K., 2013.- 255 p.
6. SM Pashchenko, GI Reznichenko, MA Voloshin Diagnosis and treatment of patients with dyshormonal breast diseases: Zaporizhzhya: Prosvita, 2011.-152 p.
7. Modern aspects of family planning: a textbook.- K., 2012.-307p.
8. Dubossarskaya ZM, Dubossarskaya Yu.A. Reproductive endocrinology: a training manual .- D.: Lyra LTD, 2008.-416 p.

9. Pregnancy, Childbirth, Postpartum and Newborn Care: A Guide to Essential Practice. WHO, Geneva, 2006.

10. Existing "Clinical Protocols" approved by the order of the Ministry of Health of Ukraine on obstetrics and gynecology

2. Methodical

1. Family Planning. Tutorial // Kyiv, 2016. - 444p.

2. Miller VE Methodical bases of preparation and carrying out of employment in higher medical educational establishments / VE Mileryan. - K., 2007. - 120p.

3. Scientific

1. Dutta, Durlav Chandra. D. C. Dutta's Textbook of Gynecology including Contraception / D.C. Dutta; ed/ Hiralal Konar. – 7th.ed. – New Delhi: Jaypee Brothers Medical Publishers, 2016. – XX, 574 p.

2. Khvorostukhina SA Sexual infections in women. - 2008. - 126 p.

Online sources for training:

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/>

