MINISTRY OF HEALTH OF UKRAINE

ODESSA NATIONAL MEDICAL UNIVERSITY

International Faculty

Department of Obstetrics and Gynecology

CONFIRMED by

Vice-rector for Scientific and Pedagogical Work

_____ Eduard BURIACHKIVSKYI

September 1, 2023

THE METHODOLOGICAL RECOMMENDATIONS FOR PRACTICAL CLASS ON THE DISCIPLINE

International Faculty, Course 6

Discipline "Endoscopic technologies in obstetrics and gynecology"

Practical lesson No 2. Hysteroscopy is operative.

ONMEDU department of obstetrics and gynecology. Practical lesson No2. discipline «Endoscopic technologies in obstetrics and gynecology». Practical Lesson No.2 Hysteroscopy is Operative.

Approved:

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

Protocol No1 of August 28, 2023

Head of the Department _____Ihor GLADCHUK

Developers:

PhD, Associate Professor

of the Department of Obstetrics and Gynecology _____Stepanovichus O.M.

PhD, Assistant

of the Department of Obstetrics and Gynecology _____Lunko T.A.

Practical lesson No2

Topic Hysteroscopy is operative.

Aim. To teach to assess the patient's condition, you will turn to endoscopic technoogy in connection with the problems of the reproductive state**:** infertility, an increase in the frequency of unbearable pregnancy, which is often associated with intrauterine pathology. To acquaint with the examination plan using modern methods of diagnosis and treatment, to analyze the data of laboratory and instrumental methods of examinations for infertility, precancerous and malignant diseases of the female reproductive system and to determine the preliminary diagnosis; determine the tactics of management (principles of surgical interventions and conservativetreatment, rehabilitation measures) in patients with infertility in intrauterine pathology, precancerous and malignant diseases of the female reproductive system;

Basic concepts: Indications and technique. Polypectomy. Myomectomy. Endometrial resection. Synechyolysis

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

I. **Organizational measures (greetings, checking those present, communicating the topic, the purpose of the lesson, motivating students to study the topic).** The use of the hysteroscopy method in modern gynecological surgery increases the diagnostic and therapeutic possibility in solving issues of intrauterine pathology. Itmakes it possible to assess the patient's condition. Learn the patient's examination plan before choosing a treatment method. To master counseling on the use of modern methods of examination and treatment in patients with infertility and various problems of intrauterine pathology.The problems of infertility and miscarriage, today occupy a leading place among the gynecological problems that women are addressing.Hysteroscopy is a transcervical examination of the uterine cavity using an endoscope. It allows you to carry out a number of effective surgical interventions for intrauterine pathology simultaneously with its diagnosis. Hysteroscopy is carried out both planned and in emergency conditions. Today, the method of hysteroscopy belongs to a procedure with low surgical risk and is based on natural access to the uterus. A method that provides an opportunity to find out and eliminate the presence of some intrauterine problems. Precancerous diseases of the gastrointestinal tract (female genital organs) are considered an urgent and multifaceted problem of modern medicine. In the structure of oncological morbidity, tumors of the female genital organs make up 20-30%. The Committee on Cancer of the International Federation of Obstetricians and Gynecologists, indicate that among the newly diagnosed patients, stage 1 is determined only in 20%, the remaining 80% of

patients go to the doctor at more common stages of the process, radical treatment is fraught with a large number of relapses and metastases or is generally impossible In cancer, the initial stage of treatment leads to recovery in 98-100 % of cases, in some patients it allows you to maintain generative function. Therefore, the prevention of recurrent conditions is the most important urgent task of health care. In other words, an important contribution to solving the problem of malignant tumors of the genital organs is made by the active detection and treatment of patients not only with the early stages of malignant tumors, but also with benign tumors, as well as with pre-tumor diseases.

Ii. Control of supporting knowledge (written work, written testing, online testing, frontal survey, etc.).

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

Requirements for knowledge:

- communication and clinical examination skills of the patient;
- ability to determine the list of necessary clinical, laboratory and instrumental studies and evaluate their results 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 advise on precancerous diseases of the female genital organs
- ability to maintain medical records.

List of didactic units:

- advising on infertility, miscarriage, precancerous diseases of the cervix, external genital organs, and advising patients with AUB of all ages
- General overview Methods of examination using gynecological examination: in mirrors, bimanual examination, rectovaginal examination
- Assessment of the patient's condition.
- necessary examination, which is carried out in a planned manner before making a decision on the use of an additional method of examination and treatment
- **2.2. Questions (test tasks, tasks, clinical situations) to test basic knowledge on the topic of the lesson.**
- **Question:**
  Endometrial hyperplastic processes: etiology, pathogenesis, classification, diagnosis, treatment methods, tactics of a general practitioner.

- Prevention of precancerous diseases of the female genital organs
- The concept of "hyperplastic processes of the endometrium."
- Etiology, pathogenesis of endometrial hyperplastic processes.

- Clinical manifestations of endometrial hyperplastic processes.
- Histological classification of hyperplastic processes of the endometrium WHO. Additional methods for diagnosing endometrial hyperplastic processes.
- Therapeutic tactics in the hyperplastic process of the endometrium in the reproductive period.
- Therapeutic tactics in the hyperplastic process of the endometrium in the premenopausal period.
- Indications for surgical treatment of the hyperplastic process of the endometrium

Typical situational tasks:

1. A patient of 32 years complains of pulling pain in the lower abdomen,

spotting brown discharge before menstruation t a abundant excretions during the cycle. With a bimanual examination, the uterus is somewhat enlarged, larger in the isthmus area, painful during the excursion, rounded in shape. Appendages on both sides without features. Preliminary diagnosis - internal endometriosis. With ultrasound in the cavity, the echopositive structure is 1.5x1.0. The most informative for diagnosis and treatment tactics in this case.

1.D-z Endometrial polyp.

2. Algorithm of examination: hysteroscopy, polypectomy. According to the results of histological examination, therapeutic measures are prescribed.

2.Tipov tests

- 1. Clinical picture in hyperplastic processes of the endometrium:
- A. Олігоменорея
- +B. Abnormal uterine bleeding
- C. Больовий синдром
- D. Shifting the leukocyte formula to the left
- E. ESR enhancement
- 2. Endometrial polyposis occurs more often:
- A . In menopause
- B. After childbirth
- +C. In menopause
- D. During progesterone treatment
- E. After discontinuation of oral contraceptives
- **Iii. Formation of professional skills and abilities (mastering skills, conducting curation, determining the treatment regimen, conducting laboratory research, etc.).**
- **3.1. The content of the tasks (tasks, clinical situations, etc.).**
- **Interactive task:**

- Students of the group are divided into 3 subgroups in the amount of 4-5 people each. We work in the offices of the antenatal clinic with gynecological patients, we give the task:
- And the subgroup is to make a preliminary diagnosis.
- Ii subgroup – to draw up a plan for the management of a gynecological patient.
- Subgroup III – evaluates the correctness of the answer of the I and II subgroups and makes its own adjustments.

Atypical situational tasks:

1. * A patient of 35 years old turned to a gynecological hospital with complaints of periodic pain in the lower abdomen, which increases during menstruation, dark brown spotting from the genital tract in the post-menstrual period. In a bimanual study: the body of the uterus is somewhat enlarged spherical, the appendages are not determined, when examining the cervix without features.

1)What is the most likely diagnosis? Adenomyosis.

2(Algorithm of examination : smear oncytomorphology and microscopy, hysteroscopy. Endometrial biopsy

2. In the pats i entka 48th rock i v, which complains of abundant i and prolonged i menstruac i th, l i kar na p i d- became i data ultrasonic dosl i dzhennya (ultrasound) suggests g i perplase i u endometrium i i. What methods of research are the most useful to use to clarify the diagnosis?

1. Hysteroscopy, fractional excision of the uterus followed by pathohistolic research

2. Hormone therapy with progestins or the use of an IUD with levonorgestrel.

Atypical tests:

A patient of 60 years complains of the appearance of bleeding from the genital tract. Menopause 8 years. In history: childbirth – 2, artificial abortions – 3. In vaginal examination: external genitalia with signs of age-related involution, the cervix is cylindrical, with no visible pathological changes. From the cervical canal – minor bleeding. The body of the uterus is of normal size, dense, painless on palpation. Appendages without features. The vaginal arches are deep, free. What additional examination methods need to be carried out to clarify the diagnosis?

1. Ultrasound of the pelvic organs, pipel biopsy of the endometrium, hysteroscopy. FDV slof the uterus.

The risk factors for endometrial cancer do not include:

- A. Ожиріння
- B. Ановуляторних менструальні цикли
- C. Пухлина яєчників
- D. Ендогенні естрогени
  E. High progesterone levels

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

• Teach to properly collect anamnesis, pay attention to the patient's complaints, which allow you to make a preliminary diagnosis, outline further tactics in different periods of life from the juvenile to postmenopausal period of a woman. The examination is carried out in a planned or urgent manner before making a decision in favor of one or another method of examination and treatment of the patient.

• Master the ability to correctly draw up a survey plan, taking into account the invasiveness of the methods, the need for these studies. Conduct modern research methods that allow you to identify and take into account all the smallest details that contribute to the recognition of the disease and allow you to correctly establish the diagnosis for the further appointment of adequate therapy.

Diseases of the genital organs are divided into neoplastic (tumor) and non-neoplastic (background, or pretumor). Non-neoplastic lesions of the external genital organs are also called vulvar dystrophy, which is

Indications for hysteroscopy:

- menstrual disorders and uterine bleeding
- adenomyosis
- hypoplasia endometry
- endometrial polyps
- polyps of the cervical canal (cervix)
- synechii (spikes)
- Small fibroids
- Infertility

Contraindications for hysteroscopy:

- profuse uterine bleeding;

- pregnancy;
- acute inflammatory processes of the female genital organs;
- infectious diseases (influenza, sore throat, pneumonia, pyelonephritis, etc.);
- cervical cancer, infiltrative endometrial cancer;
- cerebral stenosis.

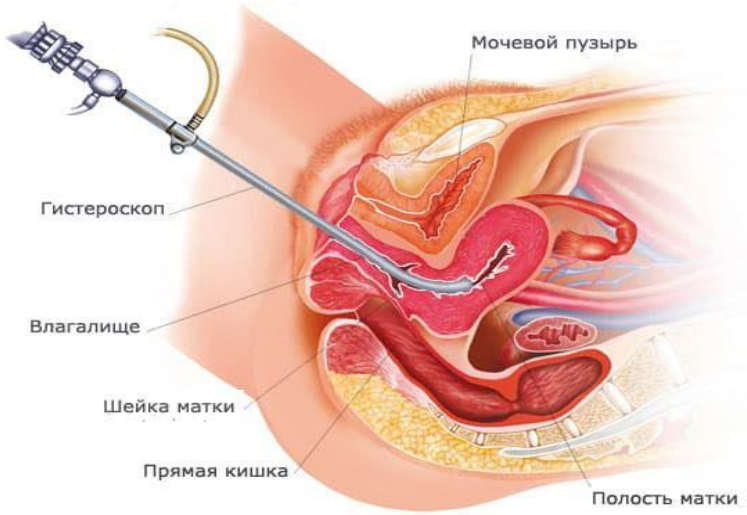
Hypoplasia endometry	nephysiological proliferation of the endometrium, accompanied by a structural restructuring of its jelly-zystoy and to a lesser extent stromal components
Atypical endometrial hyperplasia	cytological atypia: it has signs of cellular and nuclear polymorphism along with disorganization of the epithelium of the endometrial glands. Benign neoplasm rising above the surface of the endometrium forming a nodular shape, consisting of the glands of the endometrium and stroma.
Endometrial polyp	Benign neoplasm rising above the surface of the endometrium forming a nodular shape, consisting of the glands of the endometrium and stroma.
Adenomyosis	Internal endometriosis of the uterus body
Uterine fibroids. Submucous variant	Benign neoplasm of the uterus body deforming cavity

• Conduct gynecological examination (in mirrors, bimanual, rectal, rectovaginal). Collect a special gynecological history, evaluate the results of laboratory examination. To collect material from the vagina, cervix, cervical canal and urethra for cytological and bacterioscopic examination. Evaluate the results of cytological, histological, virological and bacteriological studies. Evaluate the results of ultrasound examination of the pelvic organs Evaluate the protocol of colposcopic examination of the cervix and vulva Make a plan for examining the patient for various nosological types of infertility, background and precancerous pathology.

Ghysteroscopy is a visual inspection of the walls of the uterus and cervical canal using a thin optical device.

The essence of the procedure lies in the fact that an endoscopic device called a hysteroscope is inserted through the cervical canal into the uterine cavity. Thanks to this, the gynecologist can assess the condition of the uterus, tubal corners and cervix in real time.

This method allows you to perform both diagnostic and therapeutic procedures, with minimal trauma, without additional incisions and completely painlessly, since the procedure takes place under intravenous anesthesia.



Diagnostic hysteroscopy is indicated for:

- Pdisturbing of the menstra al-cycle (AMK, hyperpolymenorrhea, dysmenorrhea)
- Pidozri for infertility, miscarriage
- Abnormal uterine bleeding in menopauseand, suspected cancer, etc.)
- Abnormal uterine bleeding in reproductive age (polyps, endometrial hyperplasias, submucous myoma nodes),
- S-m Asherman (intrauterine splice)

Method of performing diagnostic hysteroscopy:

Diagnostic operations can be performed without the use of anesthesia. Anesthesia is traditionally used during surgical hysteroscopy – intravenous (general) anesthesia. Previously, the patient is asked not to drink or eat, as well as to undergo a standard set of laboratory tests. Hysteroscopic operations are performed on the usual 7-10 days after the onset of menstruation. At this time, the endometrial layer is the smallest, providing maximum visibility.

The patient is placed in a dorsal lithotomy position. The external genitals, perineum and arrogance are treated with antiseptic solutions. Vaginal speculum - Simsa, inserted into the posterior vault of the vagina will be pulled down. Remove the cervix. Fix the front lip with ball forceps. After dividing the cervical canal, an endoscope is inserted into the uterine cavity. It allows you to carry out a number of effective surgical interventions for intrauterine pathology simultaneously with its diagnosis.

Hysteroscopy is carried out both planned and in emergency conditions.

Stages of hysteroscopy:

1. Processing the operating field.
2. Exposure of the cervix in the mirrors.
3. Fixation of the cervix by the front lip.
4. Treatment of the cervix and vagina with an antiseptic solution.
5. Probing the uterus.
6. Dilation of the cervical canal by Hegar expanders to No. 8-11.
7. The introduction of a hysteroscope tube into the uterine cavity and its examination.
8. If necessary, manipulation in the uterus.
9. Biopsy. Tool output.

Examination of the uterus should be complete. After the introduction of the hysteroscope tube into the uterine cavity, panoramic hysteroscopy is first performed. In this case, the tube of the instrument is located behind the inner eye of the cervical canal so that the field of view covers the entire uterine cavity. It is necessary to determine its shape, size, presence or absence of deformations of its walls, pathological formations, height and color of the mucous membrane, conduct a detailed examination of the endometrium. The tube of the hysteroscope is brought closer to the center of the bottom of the uterus. In this case, the main landmarks are the eyes of the fallopian tubes. Having examined the endometrium of the bottom of the uterus, proceed to the inspection of the tubal eyes. Attention should be paid to their presence, shape, size, nature and height of the endometrium in the area of the tubal angles, the presence or absence of pathological formations. Bringing the end of the hysteroscope closer to the walls of the uterus, the endometrium and vascular pattern of the surface of the anterior, posterior and lateral walls of the uterus are examined in detail. When pathological formations are detected in the uterine cavity, their consistency is determined with the help of hysteroscopic instruments, and, if necessary, intraoperative correction of pathology is carried out. The final stage is an targeted biopsy of the endometrial sites and a final examination of the uterine cavity. At the end of the study, the hysteroscope is removed from the uterus.

Features of operative hysteroscopy.

To perform hysteroscopic operations, the following tools are required:

- rigid panoramic hysteroscope with diagnostic and operational buildings;
- optical operating tools (scissors, resector forceps);
- flexible and semi-flexible auxiliary tools - scissors, biopsy spines;
- resectoscope with a set of electrodes;
- Endomat;
- Videomonitor;
- HF current source;
- light source (halogen or xenon);

Surgical interventions in their complexity are simple, do not require laparoscopic control, endotracheal anesthesia, complex equipment and can be performed in a hospital one day, and complex, requiring special conditions of execution.

Pgrowth and **hysteroscopicand surgeryy:**
- removal of small mucous polyps;
- separation of thin synechiae;
- removal of foreign bodies that are freely located in the uterus;
- removal of small submucous nodes on the leg;
- removal of areas of hyperplastic mucous membranes;
- removal of residues of placental tissue and ovum;

Ckladnand hysteroscopic operationsy:
- removal of large parietal fibrous polyps of the endometrium;
- dissection of dense fibrous and fibromuscular synechiae;
- Hysteroscopy metroplasty;
- iomectomiya;
- Ablyacia endometry;
- removal of foreign bodies immersed in the wall of the uterus;
- Phaloposcopy;
- hysteroscopic sterilization.

Fluidhysteroscopy is usually used for intrauterine surgery.

In electrosurgery, it is worth using fluids that do not conduct electric current. For this purpose, low molecular weight solutions are mainly used (1.5% glycine, 5% dextrose, 3% sorbitol, 5% glucose, reopoliglucan, polyglukin).

In operations performed with mechanical tools, simple fluids are used to expand the uterus (saline, Hartmann, Ringer solutions, etc.).

When using a laser, simple saline fluids are used: saline, Hartmann's solution, etc.

Preparation for operative hysteroscopy does not differ from that before diagnostic hysteroscopy.

Numbing. When performing simple hysteroscopic operations, the same type of anesthesia is used as for diagnostic hysteroscopy. These operations can be performed under local anesthesia (paracervical solution of novocaine and lidocaine), but remember about possible allergic reactions to drugs.

It is better to use intravenous anesthesia (diprivan, thiopental), unless a long operation is expected (more than 30 minutes). For long-term operations, you can use epidural anesthesia, endotracheal anesthesia. When combined with laparoscopy, it is better to use endotracheal anesthesia.

Interactive task:

Students are divided into 3 brigades in the amount of 3-4 people each. After the above situational task, we give the task:

The first team is to make a preliminary diagnosis and draw up a plan for examining the patient;

The second brigade is to draw up a treatment algorithm; The third brigade – assesses the correctness of the response of the first and second brigades and makes its own adjustments;

Situational task:

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

- To advise women on menstrual disorders
- Evaluate the patient.
- Choose a method of treatment in adolescents, in women of reproductive age, in the oral report on the thematic patient.
- 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.

Control of professional skills

In the gynecological department:

1. Collect anamnesis, perform an objective and gynecological examination of the patient.
2. Establish a preliminary diagnosis.
3. Assign a plan of examination and treatment

4. Practicing the skills of diagnostic and operational hysteroscopy zastasov simulators.

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

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

The structure of the current assessment in the practical lesson:

1. Evaluation of theoretical knowledge on the topic of the lesson:
- methods: survey, solving a situational clinical problem;
- The maximum score is 5, the minimum score is 3, the unsatisfactory score IS 2.
2. Assessment of practical skills and manipulations on the topic of the lesson:
- methods: assessment of the correctness of practical skills;
- The maximum score is 5, the minimum score is 3, the unsatisfactory score IS 2.
3. 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 conducting a

differential diagnosis d) justification of the clinical diagnosis, e) drawing up a treatment plan;

- The maximum score is 5, the minimum score is 3, the unsatisfactory score IS 2.

Criteria for the current assessment in a practical lesson:

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

5.List of recommended literature.

Basic:

1. Obstetrics: student’s book = Акушерство: підручник / Gladchuk I.Z., Ancheva I.A. Vinnytsia: Nova Knyga, 2021. –288 p.
2. Obstetrics and Gynecology: in 2 vol.:textbook. Volume 2. Gynecology / V.I. Gryshchenko, M.O. Shcherbina, B.M. Ventskivskyi et al.; edited by V.I. Gryshchenko, M.O. Shcherbina. — 3th edition. – K.: AUS Medicine Publishing, 2022 – 352 p.

3. Oats, Jeremy Fundamentals of Obstetrics and Gynaecology [Text]: Liewellyn-Jones Fundamentals of Obstetrics and Gynaecology / J. Oats, S. Abraham. – 10th ed. – Edinburgh [etc.]: Elsevier, 2017. – VII, 375 p.
4. Llewellyn-Jones Fundamentals of Obstetrics and Gynaecology (10th Ed). Jeremy Oats, Suzanne Abraham. Elsevier. 2016. – 384 pp.
5. 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.

Additionally:

1. 2011 IFCPC Colposcopic Terminology. Clarification on practical use.- K.. - "Polygraph Plus", 2018.- 62 p.
2. Modern technical teaching aids (see appendix to the work program of the 4th year) Prevention of purulent-septic complications during laparoscopic surgeries on pelvic organs with the risk of vaginal microbiota contamination / Zaporozhan VN, Gladchuk IZ, Rozhkovska NM, Volyanska AG, Shevchenko OI //World of Medicine and Biology.-2020- #1(71). - P.49- 53. (Web of science)

Electronic information resources

1. https://www.cochrane.org/- Cochrane / Cochrane Library
2. https://www.acog.org/- The American College of Obstetricians and Gynecologists
3. https://www.uptodate.com– UpToDate
4. https://online.lexi.com/- Wolters Kluwer Health
5. https://www.ncbi.nlm.nih.gov/- National Center for Biotechnology Information / National Center for Biotechnology Information
6. https://pubmed.ncbi.nlm.nih.gov/- International Medical Library / National Library of Medicine
7. https://www.thelancet.com/- The Lancet
8. https://www.rcog.org.uk/- Royal College of Obstetricians & Gynecologists
9. https://www.npwh.org/- Nurse practitioners in women's health
10. http://moz.gov.ua- Ministry of Health of Ukraine
11. www.ama-assn.org– American Medical Association /American Medical Association
12. www.who.int- World Health Organization
13. www.dec.gov.ua/mtd/home/- State Expert Center of the Ministry of Health of Ukraine
14. http://bma.org.uk– British Medical Association

15. www.gmc-uk.org- General Medical Council (GMC)
16. www.bundesaerztekammer.de– German Medical Association
17. www.euro.who.int- European Regional Office of the World Health Organization