MINISTRY OF HEALTH OF UKRAINE

ODESA NATIONAL MEDICAL UNIVERSITY

Department of Obstetrics and Gynecology

APPROVED

Vice-rector for scientific and pedagogical work

_____ Eduard BURIACHKIVSKYI

September 1st, 2025

METHODOLOGICAL RECOMMENDATIONS FOR PRACTICAL CLASSES ON THE ELECTIVE DISCIPLINE "ENDOSCOPIC TECHNOLIGIES IN OBSTETRICS AND GYNECOLOGY"

Level of higher education: second (master's)

Field of knowledge: 22 "Healthcare"

Specialty: 222 "Medicine"

Specialization: "Obstetrics and Gynecology"

Educational and professional program: Medicine

Approved:

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

Protocol No. 1 dated August 27, 2025.

Head of the Department, Doctor of Medicine, Professor _____ Ihor GLADCHUK

Developers:

Ph.D., associate professor of the Department of Obstetrics and Gynecology

O. STEPANOVICHUS

Ph.D., assistant professor of the Department of Obstetrics and Gynecology

T. LUNKO

Reviewers:

Ph.D., associate professor of the Department of disaster medicine and military medicine Andrii KOLOTVIN

Ph.D., associate professor of the Department of simulation medical technologies Mikhailo PERVAK

Practical lesson №1.

Topic: Hysteroscopy in the diagnosis of gynecological pathology.

Aim: To systematize and deepen knowledge on the topic of practical training. To form a clear idea of the examination of the mucous membrane of the uterus, during hysteroscopy. Learn the patient's examination plan before performing diagnostic hysteroscopy. Get acquainted with the types and capabilities of modern hysteroscopic equipment when examining the uterus. Master the basic technique of hysteroscopic intervention in gynecology. Determine indications and contraindications for hysteroscopy. Learn a plan for managing patients in the postoperative period

Basic concepts: Diagnostic hysteroscopy. Indications. Contraindications, complications Technique. Hysteroscopic picture of the uterine mucosa, depending on the pathological conditions (hyperplastic processes of the endometrium, submucous uterine fibroids, intrauterine overflows, intrauterine synechiae).

Plan:

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

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 patients on AMK of all ages, infertility, miscarriage, malformations;
- general inspection, methodes of examination using gynecological examination: in mirrors, bimanual examination, rectovaginal examination
- o theprice 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

Typical situational tasks:

1. A patient of 32 years complains of pulling pain in the lower abdomen, spotting brown discharge before menstruation, and abundant excretions during the cycle. With a bimanual examination, the uterus is slightly enlarged, more in the area Isthmus, painful during the tour,rounded 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.Endometrial polyp.
2.Algorithm of examination: hysteroscopy, polypectomy. According to the results of histological examination, therapeutic measures are prescribed.

Typical tests:

1. Clinical picture in hyperplastic processes of the endometrium:
A. Oligomenorrhea
+B. Abnormal uterine bleeding
C. Pain syndrome
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

2. Discussion of theoretical questions to test basic knowledge on the topic of the lesson.

Question:

1. Endometrial hyperplastic processes: etiology, pathogenesis, classification, diagnosis, treatment methods, tactics of a general practitioner.
2. Prevention of precancerous diseases of the female genital organs
3. The concept of "hyperplastic processes of the endometrium."
4. Etiology, pathogenesis of endometrial hyperplastic processes.
5. Clinical manifestations of endometrial hyperplastic processes.
6. Histological classification of hyperplastic processes of the endometrium WHO. Additional methods for diagnosing endometrial hyperplastic processes.
7. Therapeutic tactics in the hyperplastic process of the endometrium in the reproductive period.
8. Therapeutic tactics in the hyperplastic process of the endometrium in the premenopausal period.
9. Indications for surgical treatment of the hyperplastic process of the endometrium

3. 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 on consultations, with gynecological patients, we give tasks after examining the video material:

- I 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.

Recommendations (instructions) for the implementation of tasks

- 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 a particular method 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 subsequent appointment of adequate therapy.

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 ways 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 for cytomorphology 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 iperplase Iu endometrium i i. What methods of research are the most useful to use to clarify the diagnosis?

1) Hysteroscopy, fractional excision of the uterus with subsequent pathohistological 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,
2. Pipel biopsy of the endometrium,
3. гістероскопія.
4. FDV of the uterine mucosa.

The risk factors for endometrial cancer do not include:

1. Obesity
2. Anovulatory menstrual cycles
3. Ovarian tumor
4. Endogenous estrogen
5. 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 a particular method 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 subsequent appointment of adequate therapy.

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:

- профузна маткова кровотеча;
- 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

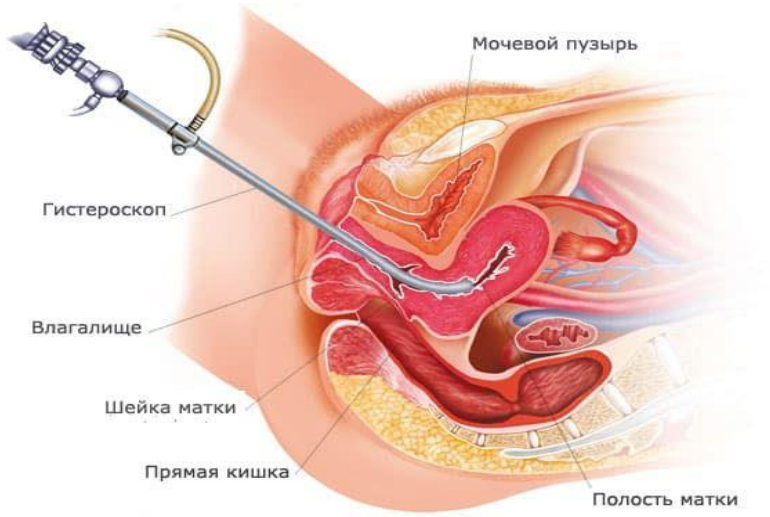
Atypical endometrial hyperplasia	proliferation of endometrial glands with signs of cytological atypia: has signs of cellular and nuclear polymorphism along with disorganization of the epithelium of the endometrial glands. Benign neoplasm rising above the surface of the endometrium is formed by a nodular form 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 pathologyy.

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.



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. 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. She 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.
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, the presence or absence of deformations of its walls, pathological formations, the height and color of the mucous membrane, to conduct a detailed examination of the endometrium. Tube hysteroscope close 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 cells. 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. Approaching the end of the hysteroscope 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 uterus, determine their consistency with the help of hysteroscopic instruments, if necessary – carry out intraoperative correction of pathology. 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.

Algorithm for performing practical skills.

Bimanual (vaginal) examination:

1) say hello to the patient;
2) identify the patient (name, age);
3) 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) with the first and second fingers of the left (right) hand, spread large embarrassing lips, place the middle finger of the "dominant" hand at the level of the posterior adhesion, gently press it to open the entrance to vagina;
9) gently and slowly insert the middle finger, then the index finger into the vagina along the back wall to the vault and cervix, the fourth and fifth fingers lead to the palm of your hand, take the thumb away to the top;
10) determine the length of the vaginal part of the cervix in centimeters;
11) determine the consistency of the cervix (dense, soft);
12) determine the patency of the outer eye of the cervical canal (closed, skipping fingertip);
13) assess the pain of the excursion of the cervix;
14) gently put the second palm on the stomach (above the symphysis) and moderately press to determine the bottom of the uterus body;
15) remove the body of the uterus between two hands and determine:

- the position of the uterus relative to the cervix (anteflexio, retroflexio);
- body size of the uterus (normal, reduced, increased);
- the consistency of the body of the uterus (tightly elastic, soft, compacted);
- mobility of the uterus body (relatively mobile, limitedly mobile);
- sensitivity on palpation (painful, painless);

16) place the fingers in the bottom of the right lateral vault and using both hands to palpate the right vaginal arch and the right applications of the uterus, determine their size, mobility and tenderness;
17) place the fingers in the bottom of the left lateral vault and using both hands to palpate the left vaginal vault and the left appendices of the uterus, determine their size, mobility and tenderness;
18) determine the capacity of the vaginal arches;

19) inform the patient about the results of the study;
20) thank the patient;
21) remove inspection gloves;
22) wash your hands.

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.
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:
A 41-year-old woman entered the hospital with a complaint of cramping pain in the lower abdomen and bleeding from the vagina. History of 1 birth, 2 medabort. Objectively: the skin covers are pale; a vaginal examination revealed uterine fibroids up to 8 weeks in pregnancy. Ultrasound revealed deformation of the uterus with a submucous node, which is located in her day.
Clinical diagnosis? Examination methods. What treatment should be carried out?

1. Uterine fibroids.Nodular form. Submucous option.
2. Hysteroscopy. resection of the submucous node.

Practical lesson №2.

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

Plan:

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

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

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. Endometrial polyp.

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

Typical 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

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

Question:

1. Endometrial hyperplastic processes: etiology, pathogenesis, classification, diagnosis, treatment methods, tactics of a general practitioner.
2. Prevention of precancerous diseases of the female genital organs
3. The concept of "hyperplastic processes of the endometrium."
4. Etiology, pathogenesis of endometrial hyperplastic processes.
5. Clinical manifestations of endometrial hyperplastic processes.

6. Histological classification of hyperplastic processes of the endometrium WHO. Additional methods for diagnosing endometrial hyperplastic processes.
7. Therapeutic tactics in the hyperplastic process of the endometrium in the reproductive period.
8. Therapeutic tactics in the hyperplastic process of the endometrium in the premenopausal period.
9. Indications for surgical treatment of the hyperplastic process of the endometrium

3. Formation of professional skills and abilities.
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:
- I 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?

A. Ultrasound of the pelvic organs,
B. pipel biopsy of the endometrium,
C. hysteroscopy.
D. FDV slof the uterus.

E. Laparoscopy

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 a particular method 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 subsequent appointment of adequate therapy.

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.

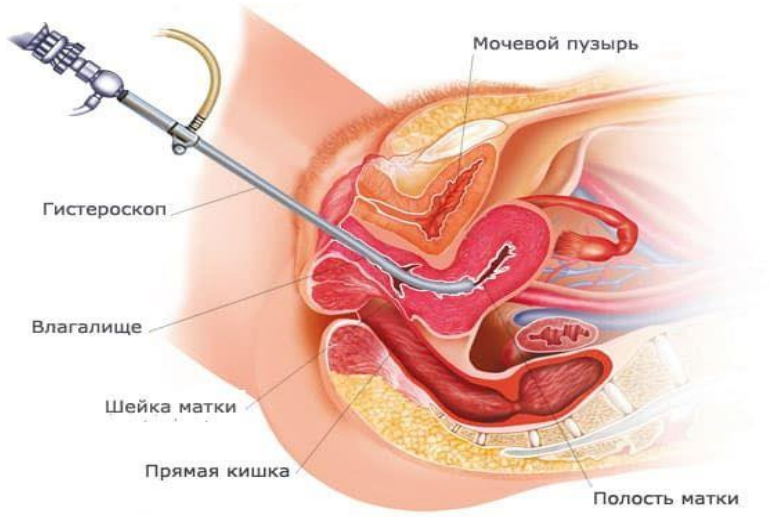
Hypoplasia endometry	nephysiological proliferation of the endometrium, accompanied by a structural restructuring of its jelly-zystoy and to a lesser extent stromal components

Atypical endometrial hyperplasia	proliferation of endometrial glands with signs of 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.

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.

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;

Practical lesson №3.

Topic: Diagnostic laparoscopy.

Aim: To systematize and deepen knowledge on the topic of practical training. Learn how to assess the state of the patient's pelvic organs. Learn the patient's examination plan before performing diagnostic laparoscopy. To form a clear idea about the examination before the surgical intervention. Learn diagnostic methods used during laparoscopy in gynecology. Get acquainted with the capabilities of modern endoscopic equipment. Master the basic technique of laparoscopic intervention in gynecology. Determine indications and contraindications for operative laparoscopy. To study the main stages of operative laparoscopy. Learn the plan for managing patients in the postoperative period.

Basic concepts: Diagnostic laparoscopy. Indication. Conducting technique, complications. Endoscopic clinical anatomy of the pelvic organs.

Plan:

1. Control of basic knowledge (written work, written test, online test, face-to-face survey, etc.).

Requirements for students' theoretical readiness to perform practical classes. Knowledge requirements:

- Acquaintance with the capabilities of modern endoscopic equipment in the diagnosis of diseases of the female genital organs
- Mastering the basic technique of endoscopic interventions,
- Determination of indications and contraindications for endoscopic interventions.

List of didactic units:

- Diagnostic laparoscopy.
- Indications, technique, complications.
- Endoscopic clinical anatomy of the pelvic organs.

Situational tasks:

Task 1. A 26-year-old woman was brought to the hospital with complaints of sudden pain in the lower abdomen radiating to the thigh and rectum, nausea, dizziness, bloody dark discharge from the genital tract for a week, delay of menstruation for 4 weeks. The skin is pale. Symptoms of irritation of the peritoneum are determined in the lower abdomen, more on the right. When examined in mirrors: cyanosis of the mucous membrane of the vagina and cervix. Bimanual examination: the uterus and its appendages are not clearly defined due to sharp pain. The symptom of a "floating uterus" is detected, the posterior vault of the vagina is bulging and sharply painful. HCG test is positive. As a result of the preliminary clinical, laboratory and instrumental examination, a preliminary diagnosis was made: Right-sided broken tubal pregnancy by the type of tubal rupture. Intra-abdominal bleeding.

What volume of surgery is planned to be carried out in the treatment of this patient?

Answer standards: 1. Laparoscopy, right-sided tubectomy, sanitation and drainage of the abdominal cavity.

Task 2. D. 26 years old. She was brought to the gynecological department by ambulance on 05/20/22 at 10 a.m. Two hours ago, she was healthy, but suddenly a sharp pain appeared in the abdomen and in the supraclavicular area, vomiting, nausea, loss of consciousness began. The last menstruation was on 05/06/22, its course was normal. Objectively: pale, lethargic, pulse 116 bpm, blood pressure - 70/40 mm. mercury Art. The abdomen is swollen, breathing does not take part. On palpation, it is sharply painful, especially in the lower areas. At the same time, the tension of the abdominal muscles is noted. The Shttkin-Blumberg symptom is positive. Vaginal: the posterior vault overhangs, the uterus is of normal size, movable, painful, difficult to palpate due to pain, the appendages could not be palpated due to the sharp tension of the abdominal wall. Blood analysis: ESR 10 mm/h, leukocytes 9•109/l.

Diagnosis? Management and treatment plan.

Answer standard: Ovarian apoplexy, mixed form. Intra-abdominal bleeding. Anemia. Hemorrhagic shock of the II century. Urgent laparoscopy is necessary. Ovary resection, hemotransfusion, treatment of shock, anemia are performed at the same time.

Test tasks:

1. Patient P., 23 years old, was operated on for endometriosis 6 months ago. She was taking hormone therapy during this time. He has no complaints. Last menstruation 10 days ago. Objectively: the skin has not changed, the pulse is 78 bpm, t - 36.6 C, blood pressure 120/80 mm Hg. Art. Abdomen is somewhat painless. Which examination method is most appropriate for this patient?

A. Diagnostic laparoscopy.
B. Ultrasound examination of the pelvic organs.
C. Hysteroscopy.
D. Laparotomy.
E. Clinical and laboratory examination.

2. What indications for diagnostic laparoscopy do you know?

A. Ectopic pregnancy.
B. Surgical sterilization.
C. Ovarian apoplexy.
D. Rupture of an ovarian cyst.

3. What relative indications for diagnostic laparoscopy do you know?

A. Diseases of the cardiovascular and respiratory system in the stage of decompensation.
B. Acute and chronic liver and kidney failure.
C. Shock and comatose states.
D. Obesity of the III-IV stage.

Answers: 1 - A; 2 – B; 3 – D.

2. Questions (test tasks, problems, clinical situations) to check basic knowledge on the subject of the lesson.

Question:

1. What is laparoscopy.
2. Indications, contraindications, conditions and technical features of diagnostic laparoscopy.
3. Complications that may occur during diagnostic laparoscopy.
4. Assessment of the condition of the pelvic organs during diagnostic laparoscopy. 5. Preparation and postoperative management of gynecological patients during surgery.

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.).

Interactive task:

Students are divided into 3 teams of 3-4 men each. After the given situational problem, we give the task: The first team is to make a preliminary diagnosis and make a plan for examining the patient. The second team is to draw up a treatment algorithm The third team evaluates the correctness of the answers of the first and second teams and makes its corrections.

Untypical tasks:

Task 1. A 32-year-old woman was brought to the General Hospital with complaints of sudden pain in the lower abdomen radiating to the thigh and rectum, nausea, dizziness, bloody dark discharge from the genital tract for a week, delayed menstruation for 5 weeks. The skin is pale. Symptoms of irritation of the peritoneum are determined in the lower abdomen, more on the right. In the mirrors: cyanosis of the mucous membrane of the vagina and cervix. Bimanual examination: the uterus and its appendages are not clearly defined due to sharp pain. The symptom of a "floating uterus" is detected, the posterior vault of the vagina is bulging and sharply painful.

1. Previous diagnosis?

2. Examination plan, treatment plan?

Answer 1. Violated ectopic pregnancy by type of fallopian tube rupture. Intra-abdominal bleeding. 2. Ultrasound of the pelvic organs, determination of hCG in blood plasma, detailed blood analysis, general urinalysis, laparoscopy. Operative treatment in emergency order. Tubectomy or tubotomy with enucleation of the fetal egg.

Task 2. An 18-year-old woman was admitted to the hospital with complaints of gradually increasing pain in the lower abdomen for 12 hours, weakness, nausea. From the anamnesis: menstruation from the age of 14 to 3-4/26-28. Last menstruation 2 weeks ago. Sex life during the year. Not pregnant. Prevented pregnancy by interrupted sexual intercourse. Objectively: the skin and mucous membranes are pale, T-36.6o C, BP-95/60 mm Hg. st., pulse - 90 beats/min. The abdomen is tense, painful in the lower parts. Positive symptoms of irritation of the peritoneum in the lower abdomen are determined. In the mirrors: the mucous membrane of the vagina and cervix is bluish.
Bimanual examination: The uterus is slightly enlarged, displacements are painful. The appendages are not clearly contoured due to the sensitivity of the study, the posterior arch is bulging. Discharges from the genital tract are dark-bloody, scanty.
Make an algorithm of the doctor's actions.

Answer standard:

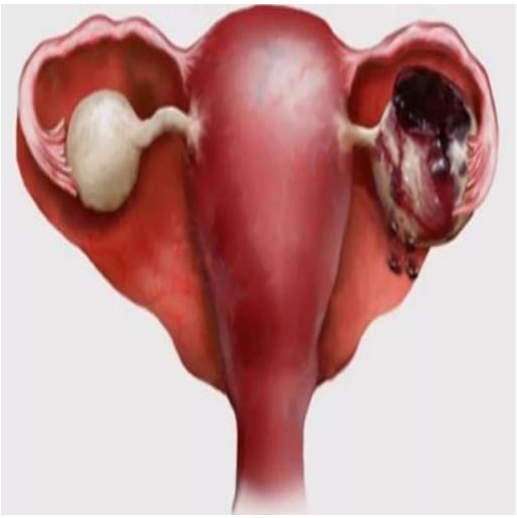
1. Urgent hospitalization in the gynecological department
2. Intensive therapy
3. Therapeutic and diagnostic laparoscopy.

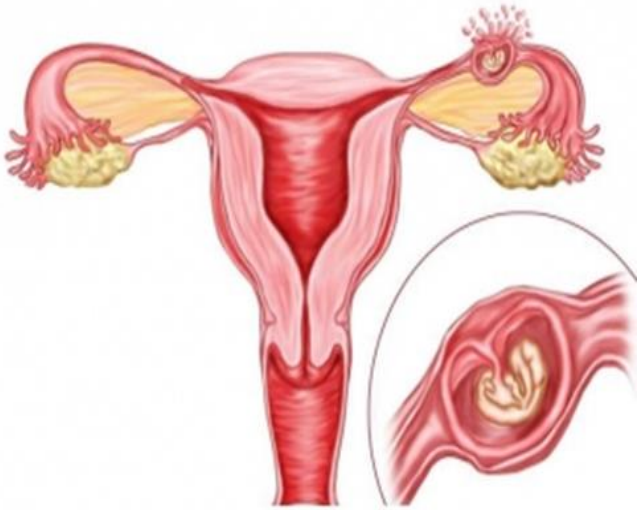
3.2 Recommendations (instructions) for performing tasks (professional algorithms, orienting maps for the formation of practical skills and abilities, etc.).

Indications for urgent laparoscopy:

1. Ectopic pregnancy.
2. Ovarian apoplexy with intra-abdominal bleeding.
3. Rupture of an ovarian cyst.
4. Torsion of the "leg" of the ovary.

5. Purulent-inflammatory diseases of the pelvic organs (purulent salpingitis, pyovar, pyosalpinx, purulent tuboovarian formations, cyst-uterine and recto-uterine space abscesses).
6. Differential diagnosis of acute surgical and gynecological pathology.
7. Necrosis of subserous myomatous nodes.
8. Diagnosis of complications during or after the procedure





Indications for scheduled laparoscopy:

1. Diagnostic laparoscopy (with biopsy of the affected organ, as indicated). 2. Tube sterilization.
2. Infertility.
3. Benign ovarian tumors.
4. Myoma of the uterus.
5. Anomalies of the development of internal genital organs.
6. Chronic pelvic pain and/or insufficient data from a clinical examination of the small organs pelvis for a final diagnosis (suspected external genital endometriosis, chronic inflammatory process of the uterine appendages, Allen-Masters syndrome).
7. Monitoring of the effectiveness of treatment of stage III-IV endometriosis. Monitoring the effectiveness of treatment of oncogynecological diseases (in specialized "second look" institutions after combined treatment of ovarian cancer).
8. Selection of access and determination of the scope of surgical intervention for unspecified tumors of the pelvic organs.

Contraindications to laparoscopy:

Absolute:	***Relative:***
Diseases of the cardiovascular and respiratory system in the stage of decompensation	Obesity of the III-IV stage
Acute and chronic liver and kidney failure Shock and coma states	Severe adhesion process of the organs of the abdominal cavity Large sizes of tumors of the genitals

Peritonitis	Hernia of the anterior abdominal wall and/or diaphragm of large or giant sizes.
	Infectious diseases (flu, sore throat, pneumonia, pyelonephritis, etc.).

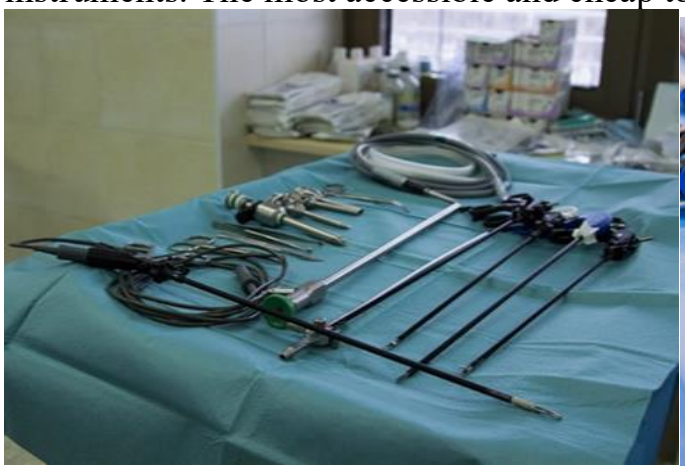
Equipment for laparoscopic surgery

Most of the equipment included in the endosurgical complex is mounted on a mobile cart (standing), which has a number of shelves for placing the equipment. The complex usually consists of a standard set of equipment, which includes:

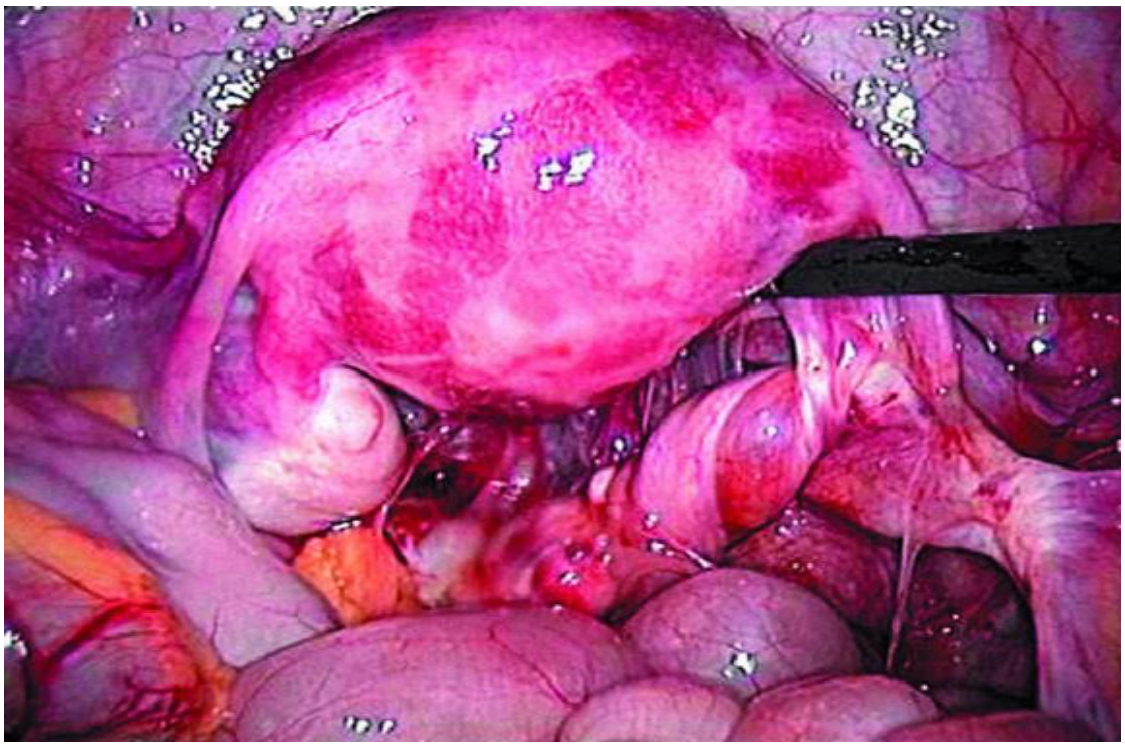
a) video camera;
b) video monitor;
c) light source;
d) insufflator;
e) aspiration system - irrigation;
e) electrosurgical apparatus.

INSTRUMENTS FOR LAPAROSCOPIC SURGERY

Endosurgical instruments can be divided into reusable (metal) and disposable (plastic) instruments. The most accessible and cheap to use are reusable collapsible metal tools.




They are made of stainless steel and alloys. Manipulators must be used during the examination of the pelvic organs. Research is carried out sequentially, starting with the uterus and preuterine space, then examining the right appendages, retrouterine space and left appendages.



Algorithm for performing practical skills.

Bimanual (vaginal) examination:

1) greet the patient;
2) identify the patient (name, age);
3) inform the patient about the necessity of conducting the study;
4) explain to the patient how the study is conducted;
5) obtain permission to conduct research;
6) wash hands;
7) put on inspection gloves;
8) spread the labia majora with the first and second fingers of the left (right) hand, place the middle finger of the "dominant" hand at the level of the posterior adhesion, gently press on it to open the entrance to the vagina;
9) carefully and slowly insert the middle finger, then the index finger into the vagina along the back wall to the vault and cervix, bring the fourth and fifth fingers to the palm, bring the thumb to the top;
10) determine the length of the vaginal part of the cervix in centimeters;
11) determine the consistency of the cervix (tight, soft);
12) determine the patency of the external eye of the cervical canal (closed, a fingertip passes through);
13) assess the painfulness of the cervical excursion;
14) gently place the second palm on the abdomen (above the symphysis) and moderately press to determine the bottom of the uterine body;
15) remove the body of the uterus between two hands and determine:

- the position of the uterus relative to the cervix (anteflexio, retroflexio);
- the size of the uterus (normal, reduced, increased);
- consistency of the body of the uterus (tight-elastic, soft, compacted);
- mobility of the uterine body (relatively mobile, limited mobility);

•sensitivity during palpation (painful, painless);

16) place the fingers in the bottom of the left lateral vault and, using both hands, palpate the left vaginal vault and the left appendages of the uterus, determine their size, mobility and painfulness;

17) determine the capacity of the vaginal vaults;

18) inform the patient about the results of the study;

19) thank the patient;

20) remove inspection gloves;

21) wash your hands.

Laparoscopy is performed according to the classical method, which includes the following main stages:

- operation field processing - placement of a uterine cannula
- application of pneumoperitoneum
- introduction of the first trocar and the beginning of the examination of the organs of the abdominal cavity (diagnostic stage of laparoscopy)
- introduction of additional trocars for manipulators
- in-depth revision of abdominal organs
- operative stage of laparoscopy
- the final stage of laparoscopy
- removal of the macropreparation, washing abdominal cavity, control of hemostasis, removal of gas and instruments
- application of single stitches or braces in places of punctures on the skin.

When performing laparoscopy, follow the general rules of operative manipulations. To control hemostasis during laparoscopic interventions, the same techniques are used as in open surgery: electrocoagulation of blood vessels, their clipping, stitching and application of nodal sutures, stitching with the help of stapling devices. In most cases, the creation of a pneumoperitoneum is performed in a closed manner with the help of a Veresh needle, which is inserted into the abdominal cavity just below the umbilical ring. The trocar is inserted through the skin incision, with moderate pressure, at an angle of 90° to the peritoneum and at this moment is turned upward in one movement by 45°. After the introduction of the main trocar, the stylet is removed and a laparoscope is inserted into the abdominal cavity. The patient is transferred to the Trendelenburg position and the abdominal cavity is examined, including the upper floor.

Open laparoscopy consists of the following stages: 1) mini-laparotomy, 2) introduction of a special trocar through the mini-laparotomy opening into the abdominal cavity, 3) fixation of the trocar sleeve to the anterior abdominal wall for its sealing, 4) creation of pneumoperitoneum through the trocar sleeve.

Laparoscopic tubectomy: Operation technique: a pneumoperitoneum is typically created. Additional trocars are introduced in the iliac-inguinal regions. After tension with forceps, the fallopian tube is clamped with the branches of the dissector and a bipolar current is applied to it in the coagulation mode. At the same time, the fallopian tube is cut along the upper edge of the mesosalpinx with simultaneous hemostasis. The fallopian tube is pulled out of the abdominal cavity with a soft clamp through the

extended contraperture to the left or right. Then the abdominal cavity and small pelvis are cleaned with an isotonic solution of sodium chloride, and cosmetic sutures are placed on the skin.

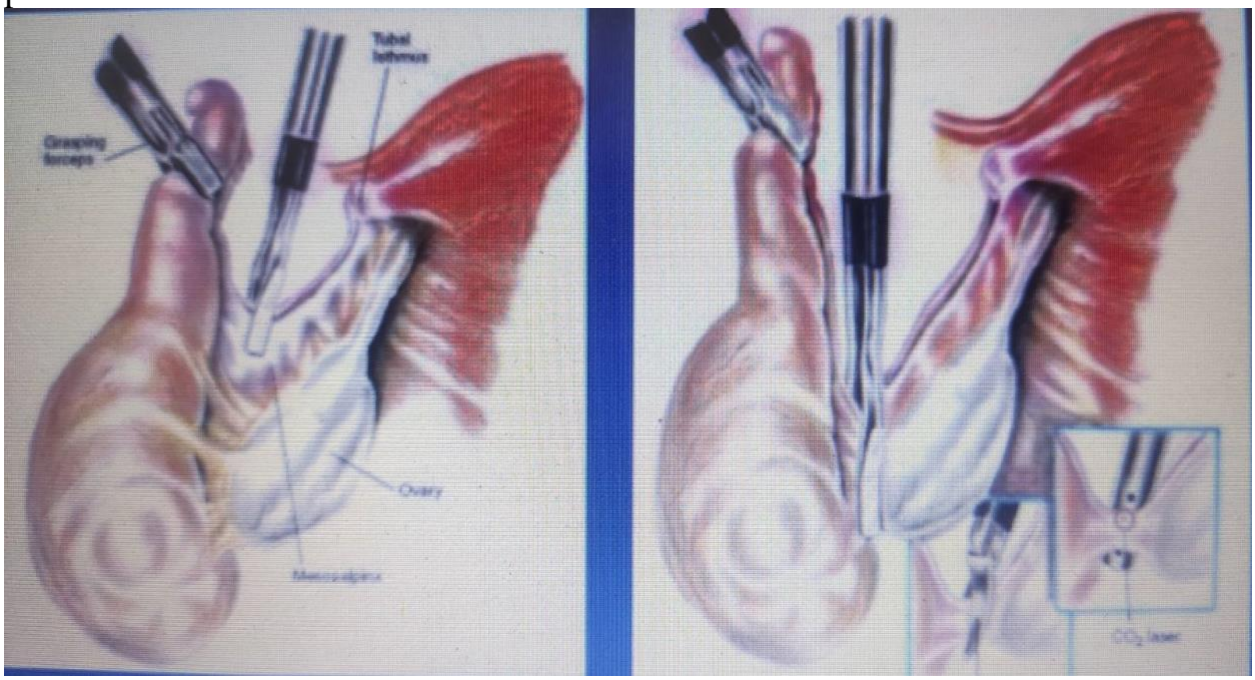


Image1. Laparoscopic tubectomy. Stages of the operation.

3.3. Requirements for work results, including to registration

1. Collect the patient's medical history correctly.
2. Identify complaints that characterize the basis of the disease.
3. Determine, based on the anamnesis of the disease, the data of subjective and objective research, the signs and features necessary to identify the causes that led to the "acute" abdomen in gynecology.
4. Correctly interpret the data of laboratory and instrumental research methods.
5. Make a plan for the examination of a patient with ovarian apoplexy.
6. Make a plan for the examination of a patient with an ectopic pregnancy.
7. Carry out a differential diagnosis of an "acute" abdomen.
8. Establish a diagnosis and make a treatment plan for a patient with ovarian apoplexy.
9. Establish a diagnosis and make a treatment plan for a patient with an ectopic pregnancy.
10. To be able to prepare the patient and postoperative management of gynecological patients during urgent surgical interventions.
11. To provide recommendations on the choice of the method of surgical treatment and the volume of surgical intervention in patients with ovarian apoplexy.
12. Provide recommendations on the choice of surgical treatment method and the scope of surgical intervention in patients with tubal ectopic pregnancy.
13. Analysis and discussion of the results of the patient's examination.

3.4. Control materials for the final stage of the lesson: problems, tasks, tests, etc.
Situational tasks:
Task 1. Patient B., 21 years old, came to the gynecological department with complaints of sharp pain in the lower abdomen radiating to the anus, dizziness that appeared suddenly after coitus. At home there was a short-term loss of consciousness. Medical history: menstruation since the age of 13, established after 2 years, 7 days each, cycle 28–34 days, painless, moderate, irregular. Last menstruation 2 weeks ago. Ago. Objective examination: general condition of the patient of moderate severity. The skin and visible mucous membranes are pale. The tongue is clean, moist. Body temperature is 37.1 °C. Pulse - 84 beats/min, rhythmic, blood pressure - 100/65 mm Hg. Art. The abdomen is moderately distended, moderately painful on palpation in the hypogastric region. Symptoms of peritoneal irritation are positive. Abdominal percussion - dulling of the sound. Pasternacki's symptom is negative on both sides. Physiological parameters are normal. Gynecological examination. The cervix is not changed. The outer eye is closed. Bimanual examination: excursions of the cervix are sharply painful, Promptov's symptom is positive. The body of the uterus is in the anteflexio position, not enlarged, dense, sensitive to palpation, mobile. In the area of the right appendages of the uterus, a tugoelastic mass measuring 5*6*5 cm is palpable, sharply painful, sharply painful. The left uterine appendages are not palpable. The posterior vault of the vagina overhangs and is sharply painful upon palpation. Discharge from the genital tract is bloody, scanty. General blood analysis: hemoglobin – 94 g/l, erythrocytes – 2.9 • 1012/l, leukocytes – 5.4 • 1012/l.
Make a diagnosis.
Additional examination methods?
Standards of answers. Apoplexy of the right ovary, hemorrhagic form. Intra-abdominal bleeding. Hemorrhagic shock of the 1st degree. Anemia I st.
2. Examination plan: general clinical and biochemical laboratory tests (general blood test, general urinalysis, blood group and Rhesus factor, biochemical blood test, coagulogram), electrocardiogram; Ultrasound of the pelvic organs; express test with urine for hCG, laparoscopy
3. Treatment tactics depend on the general condition of the patient, the volume of intra-abdominal bleeding, hemodynamic indicators. The scope of surgery for this woman is laparoscopy, resection of the left ovary. Sanitation and drainage of the abdominal cavity.

Task 2. A 13-year-old girl complains of spasm-like pain in the lower abdomen, which appeared suddenly during physical education, nausea, vomiting. From the anamnesis: menstruation since the age of 12, not established, abundant, painful. As a child, she suffered from childhood infections. Denies gynecological diseases. Objectively: the skin and mucous membranes are pink. Pulse - 82 beats per minute, blood pressure - 100\60 mm Hg. Body temperature - 38ºC. When palpating the abdomen, the Stotkin-Blumberg symptom is positive in the right iliac region. Virgo! Gastrointestinal-rectal examination is impossible due to its sharp pain.
What studies are most informative for making a diagnosis?
Reply 1. Ultrasound of the pelvic organs.

2. Laparoscopy of the pelvis and abdominal cavity.
3. Computed tomography of the pelvic organs.

Task 3. A 34-year-old patient came to the hospital with complaints of acute pain in the lower abdomen, nausea, vomiting. 6 months ago, during the examination, the gynecologist suspected the presence of a right ovarian cyst, but the patient refused the examination. Last menstruation 3 weeks ago, on time. She considers herself sick for 2 weeks, when cramp-like pain in the lower abdomen first appeared. There was no dizziness, she did not consult a doctor. From the anamnesis: she was treated for inflammation of the uterine appendages. Objectively: general condition of moderate severity. Temperature 37.7oC, pulse 86 bpm. AT-130/90mm Hg. Art. The tongue is coated, the abdomen is moderately distended, the Shchotkin-Blumberg symptom is positive in the lower abdomen. Bimanual examination: attention is drawn to sharp pain when the cervix is displaced. To the right of the uterus, a 4x5 cm, painful, elastic mass can be palpated. On the left, applications are not defined. Vaults are deep, palpation of the right vault is painful. Vaginal discharge - white, moderate. Preliminary diagnosis: Torsion of the pedicle of the tumor of the right ovary. What volume of surgery should be performed in the treatment of the patient?
Answer standard: In this clinical case, treatment should begin with laparoscopy. The scope of the operation depends on the state of the applications and structures involved in the twist. Detorsion is performed and the state of applications after detorsion is evaluated. In the absence of signs of necrosis and the appearance of positive nutritional characteristics: pink color of the mucous membrane, moisture of the mucous membrane, pulsation of blood vessels - at this stage, the surgical intervention is completed. If signs of necrosis appear - adnexectomy. If the omentum or loops of intestines are twisted, their viability and further tactics are evaluated. In the case of necrosis - resection of the omentum, resection of the intestine with anastomosis.

Test tasks STEP-2:
1) (step 2018) A woman was delivered by ambulance with cramp-like pain in the right iliac region that arose after a delay in menstruation, radiating into the rectum. bloody discharge from the genital tract. Objectively: heart rate - 100/min., blood pressure - 90/60 mm Hg. The skin is pale. The abdomen is painful on palpation, a positive symptom of Shtokkin-Blumberg. During a gynecological examination, cervical dislocations are painful, the right appendages are enlarged, painful, the posterior vault overhangs, the discharge is bloody. Make a preliminary diagnosis:

A. Acute right-sided adnexitis
B. Appendicitis
C. Abortion in progress
D. Apoplexy of the right ovary
E. Interrupted ectopic pregnancy

2) A woman complains of a sudden pain in the lower abdomen radiating to the anus, nausea, dizziness, bloody dark secretions from the genital tract for a week, delay of menstruation for 4 weeks. Symptoms of peritoneal irritation are positive. In the

mirrors: blueness of the mucous membrane of the vagina and cervix. During bimanual examination, the symptom of "floating uterus", protrusion and soreness of the back and right lateral arches of the vagina is noted. The most likely diagnosis?

A. Acute appendicitis.
B. Ovarian apoplexy.
C. Acute right-sided adnexitis.
D. Twist the legs of the ovarian tumor.
E. Violated ectopic pregnancy.

3) The woman is bothered by acute pain in the abdomen, an increase in body temperature up to 38.0°C. She known about the presence of uterine fibroids for 3 years. Symptoms of peritoneal irritation are positive in the lower abdomen. Leukocytes 10.2 T/l, ESR 28 mm/h. During bimanual examination, the body of the uterus is enlarged up to 8-9 weeks of pregnancy, on the front surface there is a sharply painful myomatous node measuring 4x4 cm, the appendages of the uterus have not changed. Ultrasound examination confirms the presence of a subserosal myomatous node. What is the most likely diagnosis?

A. Internal endometriosis.
B. Tuboovarian tumor.
C. Necrosis of myomatous node.
D. Acute adnexitis.
E. Perimetritis.

4) A 20-year-old patient came to the gynecology department with complaints of sharp pain in the lower abdomen after physical exertion. Last menstruation 2 weeks ago. During vaginal examination, the uterus is not enlarged, painless, the appendages on the left side are sharply painful during palpation, which complicates the examination. Promtov's symptom is positive. The back arch overhangs, painful. Pulse 96 bpm, blood pressure 100/60 mm Hg. What pathology are we talking about?

A. Acute left-sided salpingo-oophoritis.
B. Apoplexy of the left ovary.
C. Pyosalpinx on the left.
D. Disrupted left-sided tubal pregnancy.
E. Tumor of the left ovary

5) (2019) A 39-year-old patient with complaints of acute pain in the lower abdomen, vomiting, accelerated urination. On examination: the abdomen is moderately distended, a positive symptom of Shtotkin-Blumberg. Pulse 88 per minute, body temperature 37°C. During bimanual examination: the body of the uterus is dense, not enlarged, mobile, painless, to the right and in front of the uterus, a mass of 6x6 cm in size is palpable, with a tight-elastic consistency, sharply painful when shifted; appendages are not defined on the left; the vaults are free; mucous discharge. An additional research method?

A. X-ray television hysterosalpingography.
B. Excretory urography.

C. Transvaginal ultrasound.
D. Puncture of the abdominal cavity through the posterior vault of the vagina.
E. Computed tomography

Practical lesson No. 4

Topic: Operative laparoscopy in the treatment of female infertility and CPPS.

Aim. Learn the causes of female infertility. Learn the plan of examination of a married couple in case of infertility. Get acquainted with the capabilities of modern endoscopic equipment in the diagnosis and treatment of infertility and CPPS (chronic pelvic pain

syndrom). Master the basic technique of endoscopic interventions. Determine the indications and contraindications for laparoscopy in the diagnosis and treatment of CPPS and infertility. Familiarize yourself with determining the main stages of laparoscopic surgery salpingostomy, salpingo -ovariolysis, endometrioid excision heterotopia, chromohydrotubation. To form a clear idea about the examination of patients before operative laparoscopy. Learn the plan for managing patients in the postoperative period.

The main ones concept: Causes of female infertility and CPPS. Salpingovariolysis. Salpingostomy. Endometrioid excision heterotopia. Chromohydrotubation. Preoperative preparation and management of the postoperative period.

Plan:

1. Reference level control knowledge (written work, written testing, online, frontal testing poll etc.).

Requirements for theoretical readiness students to perform practical classes (knowledge requirements, list of didactic units).

Knowledge requirements:

- Skills communication and clinical examination the patient
- Ability determine list necessary clinical and laboratory and instrumental research and evaluate their results.
- Ability establish preliminary and clinical diagnosis disease
- Perform medical manipulation
- Ability to conduct medical documentation

List didactic units:

- Causes of female infertility and CPPS
- Salpingovariolysis
- Salpingostomy
- Excision of endometrioid heterotopia
- Chromohydrotubation
- Preoperative preparation and management of the postoperative period

Typical situations tasks

1. To the gynecologist a 29- year -old patient applied with complaints about infertility. Sexual by life has been married for 4 years, from pregnancies are not protected. There were no pregnancies. During the examination women established: development sexual organs without deviations from norms _ Fallopian tubes are not passing in the distal departments Basal temperature during three menstrual cycles two -phase. The most likely cause of infertility ? Treatment.

Answer: Tubo- peritoneal form of infertility. Laparoscopy, salpingoneostomy, chromohydrotubation are indicated.

2. A 25- year -old woman turned to the women's clinic consultation with complaints about absence offensive pregnancy. Married for 2 years, lives regular sexual life, does not use contraceptives. It is known from the anamnesis that repeatedly was treated in

the gynecological department department for exacerbations chronic adnexitis. Which diagnostic method is the most appropriate to recommend to the patient?
Answer: Diagnostic laparoscopy. Chromohydrotubation.
Typical tests task
1. The patient is 35 years old complains about the absence pregnancy for 7 years marital life _ During a gynecological examination, the doctor suspected external genitalia endometriosis _ What method is the gold standard for diagnosing external genitalia endometriosis ?
A. Culdoscopy.
B. Laparoscopy.
C. Hysteroscopy.
D. Colposcopy.
E. Ultrasound.
2. Woman T, 27 years old, consulted a gynecologist about the absence of pregnancy after 3 years of marriage. The man was examined, no pathology was found. Polycystic ovary syndrome was detected during the woman's preliminary examinations. Conservative treatment (hormonal, stimulation of ovulation) was carried out - without effect. What is the most appropriate thing to offer the patient in this case?
A. Anti-inflammatory therapy.
B. Laparoscopy. Ovarian drilling.
C. Laparotomy. Wedge resection of the ovaries.
D. Laparoscopy. Salpingovariolysis.
E. Laparoscopy. Ovariectomy.
Answers 1 - B, 2B.

2. Questions (test tasks, tasks, clinical situations) for verification basic knowledge on the subject of the lesson.
Question:
1. Classification infertility in marriage.
2. Methods diagnostics female infertility, indications.
3. Modern methods of conservative treatment patients with infertility.
4. Endoscopic methods of treating infertility patients.
5. Operative laparoscopy as a method of diagnosis and treatment of patients with external genitalia endometriosis.
6. Operative laparoscopy as a method of diagnosis and treatment of patients with CPPS.
7. Surgical reconstructive- plastic methods operations on fallopian tubes.
8. Chromohydrotubation as a method of diagnosing the tubo- peritoneal form of infertility.
9. Operations of HF cauterization of ovaries, resection of ovaries in anovulatory form of infertility.

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

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

Interactive tasks:

Students groups divide into 3 subgroups of 4-5 people each. We work in offices female consultations with gynecological patients, we give tasks:

And the subgroup - put previous diagnosis.

second subgroup is to draw up a management plan gynecological the patient

III subgroup - evaluates correctness answers of subgroups I and II and adds his own corrections.

Atypical situational tasks:

Task 1.

The woman is 26 years old turned to to the gynecologist with and complaints about infertility, SCHTB within 3 years. Menstruation from 14 years old, painless, moderate. Cycle 4-5/28, regular. At the age of 16, she underwent an appendectomy complicated by peritonitis. Postcoital test and analysis sperm husband - within the norm. According to the data measurement basal temperature ovulatory, luteal cycles the phase is 12-14 days. According to ultrasound of the pelvic organs, there is a 4x6 cm mass in the area of the right fallopian tube. Define further management plan.

Answer: Therapeutic and diagnostic laparoscopy, chromohydrotubation. Adhesiolysis. Salpingoneostomy.

Task 2.

A gynecological examination of a 29-year-old patient suffering from chronic pelvic pain revealed: the uterus in fixed retroflexio - versio, painful and lumpy sacro -uterine ligaments. It is known from the anamnesis that they have been married for 5 years and no pregnancies have occurred. Previous diagnosis ? Management tactics

Reply: Frivolous genital endometriosis ? To determine the final diagnosis of UTI, the patient is indicated for laparoscopy, excision of endometriosis foci followed by histological examination.

Unusual test tasks:

1. The patient is 32 years old complains about the absence pregnancy within 5 years marital life. The basal temperature is biphasic. Man examined - healthy. During metrosalpingography, the fallopian tubes are filled with contrast to the ampullary one department, in the abdomen there is no contrast in the cavity. Which of the above ? most expedient prescribe for treatment this one sick ?

A. Laparoscopic fallopian tube plastic surgery
B. Courses hydraulic tubing
C. Stimulation ovulation
D. Extracorporeal fertilization
E. Insemination with donor sperm

2. endometrioid cyst of the left ovary 5 cm in diameter, according to clinical examination and pelvic ultrasound. Operative treatment is offered. Determine the expected volume of the operation.

A. Laparotomy. Extraction of the cyst capsule.
B. Laparotomy. Adnexectomy.
C. Laparoscopy. Adnexectomy.
D. Laparoscopy. Enucleation of the ovarian cyst capsule.

E. Laparoscopy. Tubectomy.

Correct answers: 1 - A, 2 - D.

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

Women's barrenness

Classification:	
I. Endocrine genesis (infertility associated with a violation ovulation) – 35-40%:	- hypothalamic-pituitary insufficiency (HGN); - hypothalamic-pituitary dysfunction (GGD) (ovarian and adrenal forms); - primary insufficiency ovaries; - violation functions sexual bodies;
II. Tubal- peritoneal genesis - 20-30%.	- hyperprolactinemia.
III. Uterine genesis - 2-3%:	- absence of a uterus; - anomalies development of the uterus;
And V. Cervical genesis - 5%.	- synechiae in the uterine cavity (Asherman 's syndrome).
V. Immunological genesis - 20%:	- availability antisperm blood pressure only in the cervical mucus ;
V I. Others forms female infertility: WITH	- with availability antisperm BP in the blood women, ova, follicular liquid _ - feminine infertility, conditioned urogenital infection; - endometriosis and infertility; - uterine myoma and infertility.

Male sterility

Classification: **Excretory sterility**	(insufficiency secretory functions sexual glands), which is conditioned congenital and acquired pathology.
Secretarial sterility	conditioned violation of the transport of sperm through the vas deferens.
mixed sterility	
Immunological infertility	when secretory insufficiency sexual glands combined with obstructive, immunological and inflammatory process

Treatment algorithm different forms of infertility

Treatment algorithm tubal genesis infertility.	Operative laparoscopy - for recovery passability fallopian tubes There is none effect (within 6-12 months) – IVF with PE (transfer embryo).
Treatment algorithm female infertility uterine genesis	Absence fallopian tubes, impossibility restoration their passability - ECO with PE. (absence of the uterus; anomalies development of the uterus; Asherman 's syndrome).
Treatment algorithm female infertility cervical genesis.	Surrogate motherhood. Provided available opportunities - operative reconstructive treatment
Treatment algorithm immunological infertility	Insemination with male sperm (ICH) in physiological or induced cycles. Absence effect - IVF with PE.
Treatment algorithm infertility, conditioned male factor.	*With availability antisperm antibodies only in the cervical mucus - in the* intrauterine insemination with a man 's sperm. *With availability antisperm antibodies of a woman's blood, ovum, follicular fluid* - intrauterine insemination with donor sperm in the background stimulation ovulation. Oligoasthenospermia 1-2 degrees - treatment by an andrologist and UCI. Grade 3 oligoasthenospermia and azoospermia - donor sperm insemination (ISD) or ICSI Absence effect - IVF with PE with donor sperm.

Chromohydrotubation (Fig. 1)

Any operation for tubal or peritoneal infertility requires the use of intraoperative ascending chromohydrotubation. To do this, before the operation, the external genitalia and vagina are treated with a solution of antiseptics. The cervix is grasped with ball forceps. A uterine cannula is inserted through the external uterine opening. Ball forceps and cannula are fixed to each other. Chromohydrotubation is performed at the beginning of the operation to determine the level of fallopian tube obstruction.
After the laparoscopic intervention on the fallopian tubes, chromohydrotubation confirms the effectiveness of the performed operation. Level obstructions fallopian tube is possible to determine from filling her liquid. Absence filling of the fallopian tube with the injected liquid testifies to it obstruction in the isthmus parts. To conduct chromohydrotubation use isotonic solution sodium chloride, colored methylene blue

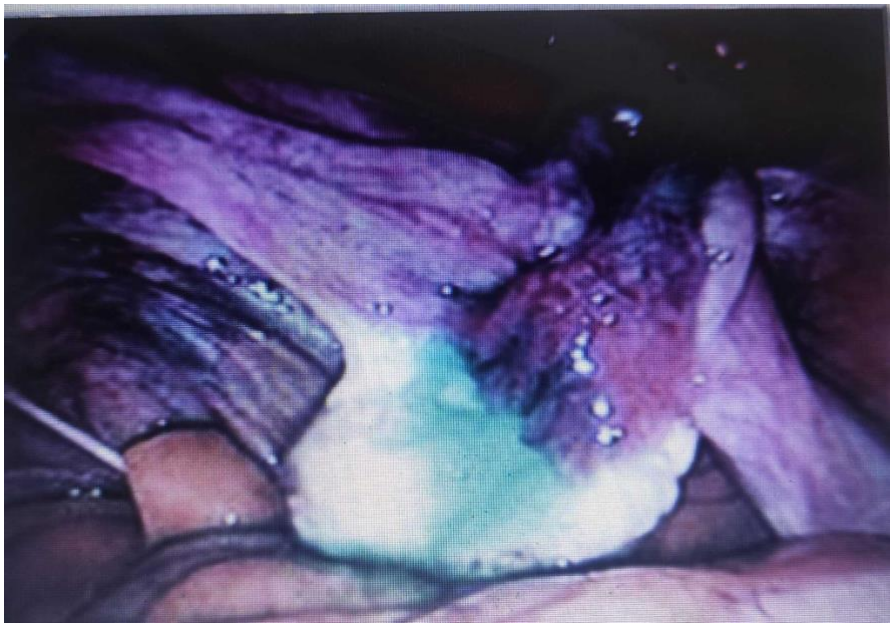


Fig. 1. Chromohydrotubation. Stage of the procedure. Effusion of methylene blue into the abdominal cavity.

Salpingoneostomy (Fig. 2)
It is performed in the presence of hydrosalpinx. After chromopertubation with the use of methylene blue dye (for better visualization of the fallopian tube), a cross-shaped incision is made through the scar tissue at the distal pole of the hydrosalpinx to form four flaps. The cut edges of the pipe are carefully grasped with an atraumatic tool clamp and produce coagulation of the serous lining of the fallopian tube for their eversion.
With a correctly performed operation, the fimbrial part of the fallopian tube is formed anew, which is also called salpingostomy according to Bruis.
According to the alternative method, two atraumatic clamps are used, with the help of which the distal part of the tube is everted for 2-3 cm. Some surgeons prefer to apply 1-2 sutures to support the tube in the given position.

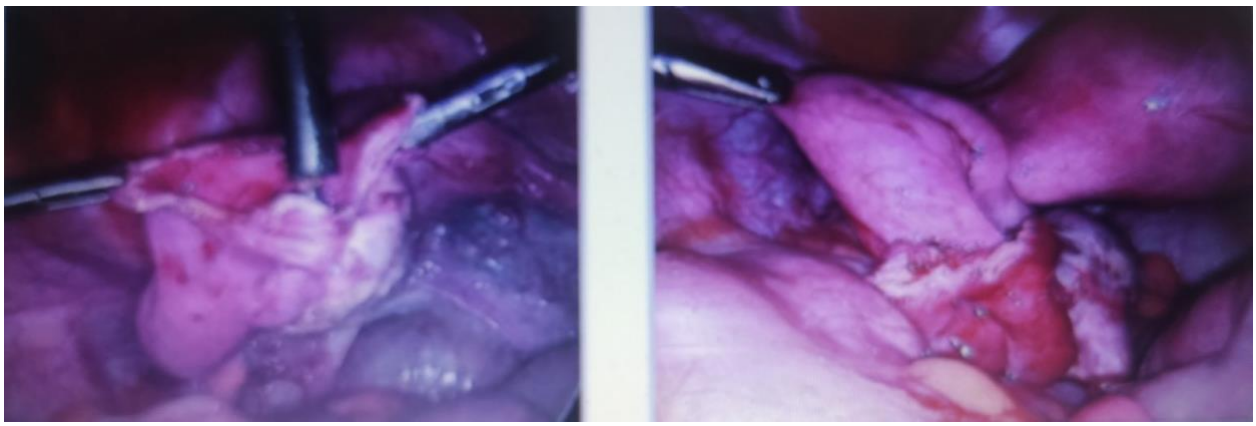


Fig. 2. Salpingoneostomy. Stages of the operation.

Ovarian diathermocauterization (drilling) (Fig. 3)

It is performed as a surgical stimulation of ovulation in polycystic ovary syndrome and is a more gentle method compared to ovarian resection. The technique consists in creating perforation holes on the surface of one or both ovaries using thermocoagulation. If necessary, additional hemostasis is performed.

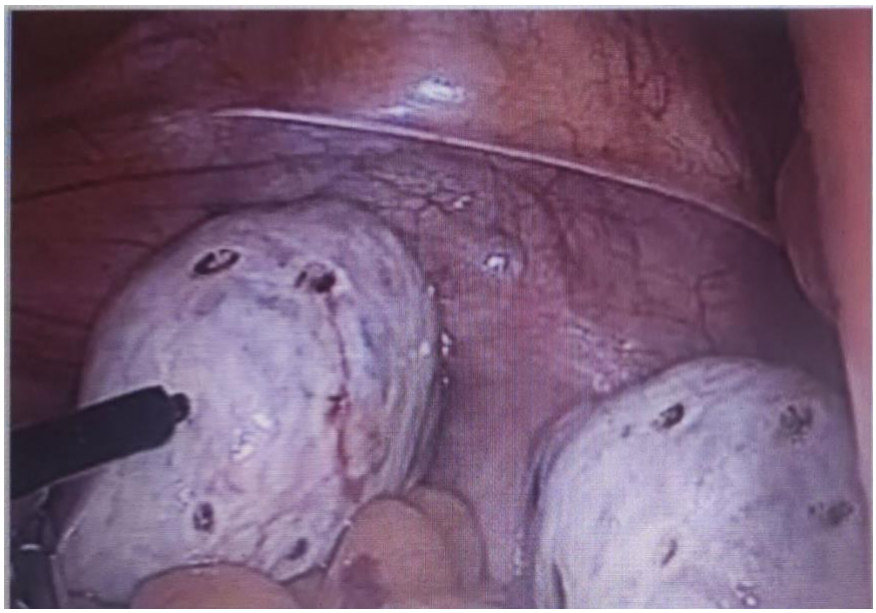


Fig. 3. Type of ovaries after diathermocauterization monopolar coagulator.

Surgical treatment of endometriosis.

Stages of surgery for excision of endometriosis foci on the peritoneum of the pelvis (Fig. 4)

- Detailed examination of the peritoneum of the vesical -uterine, recto -uterine recesses, ovaries, fallopian tubes, broad ligaments, uterus, distal part of the rectum, sigmoid colon;
- Assessment of the size of the detected foci, the degree of invasion into the surrounding tissues, examination of their surface using atraumatic clamps (lifting and

displacing the peritoneum surrounding the lesion); when growing into the underlying tissue, the pathological areas are displaced relative to the subperitoneal tissue;

- creation of optimal conditions for the elimination of pathological foci (removal of intestinal loops, omentum to the upper floors of the abdominal cavity, dissection of adhesions, etc.);
- excision or local destruction of endometriosis foci on the pelvic peritoneum (electrocoagulation)

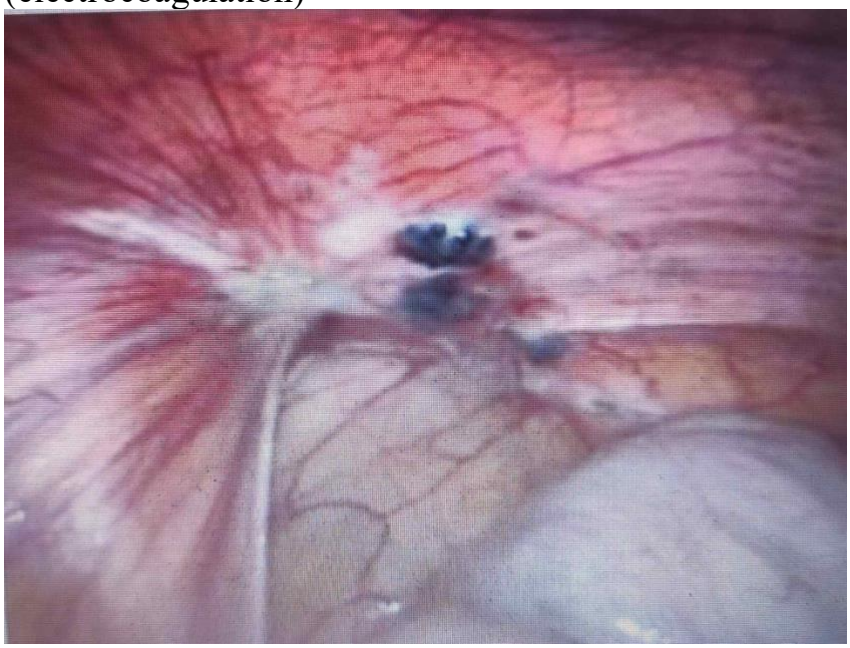


Fig. 4. Foci of endometriosis on the parietal peritoneum.

Endoscopic treatment of the adhesion process of the pelvic organs.

Scissors, aquadissection, electrosurgery, laser surgery, and an ultrasonic scalpel are used for dissection of adhesions. With a pronounced degree of the adhesion process, there is a danger of damage to internal organs (Fig. 5).

Monopolar electrodes should not be used during manipulations on the intestines, as sparks and damage to the intestines are possible.

which is out of sight. When dividing adhesions on the intestines, scissors are most often used, and if necessary, bipolar coagulation.

adhesion barriers and fluids are used to prevent the recurrence of adhesion disease.

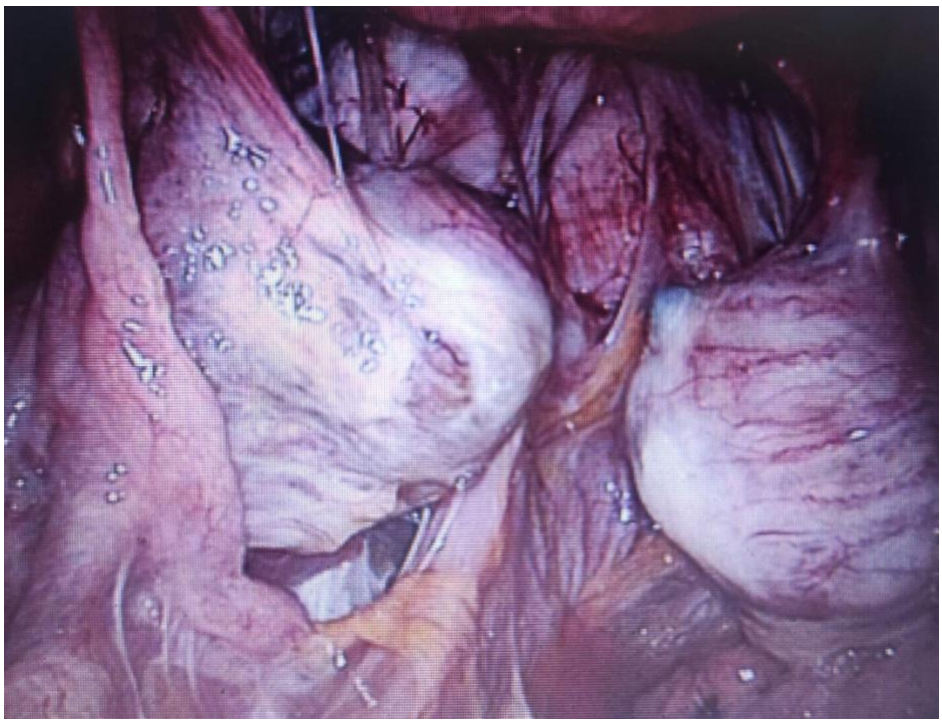


Fig. 5. Adhesion process of pelvic organs.

3.3 Requirements for results work, including to registration.

1. Oh, and you too patient with infertility.
2. To prescribe examination of patients with infertility.
3. Evaluate data clinical laboratory and instrumental examination patients with infertility.
4. Determine the stages of endometriosis during diagnostic laparoscopy.
5. Determine the volume of surgical intervention in the treatment of external genitalia endometriosis in patients with infertility.
6. Prescribe the most appropriate treatment for a patient with UTI.
7. Prescribe the most appropriate treatment for a patient with SCHTB, hydrosalpinx.

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

Unusual situational tasks:

1. During a diagnostic laparoscopy, a 34-year-old patient who applied to the clinic for infertility was found to have: hemorrhagic effusion in the abdominal cavity, blue " eyes ", stellate -scarring lesions of the peritoneum. Fallopian tubes pass from both parties _ Ovaries visually unchanged. _ Done biopsy specified formations _ Previous diagnosis ? Volume of surgical intervention.

Answer. Frivolous genital endometriosis _ Laparoscopy. Excision of endometriosis foci followed by histological examination.

2. A 28-year-old patient was admitted to the gynecology department with complaints of infertility for 4 years, CPPSS. From the anamnesis: 1 childbirth, 1 artificial abortion, menstrual cycle without any features, basal temperature – biphasic. The man's spermogram is normal. She was repeatedly treated for pelvic inflammatory processes.

2 years ago, she underwent a right-sided tubectomy due to a broken tubal pregnancy. What are the driving tactics?

Answer: Laparoscopy. Chromohydrotubation. Separation of adhesions

Test tasks krok-2

1. (2020) A 26-year-old patient has been married for 5 years. In the absence of contraception and the presence of regular sexual life pregnancy absent, husband examined, fertile. From the anamnesis: at the age of 19 operated on the phenomena spilled peritonitis. Which research is it necessary to find out the causes of infertility?

A. Hysterosalpingography or laparoscopy *
B. Research sexual steroids, gonadotropins, folliculometry
C. Functional tests diagnostics
D. Hysteroscopy with assessment functional state of the endometrium
E. Kymographic pertubation fallopian tubes.

2. (2019) A 32-year- old woman turned to the doctor with complaints about absence pregnancy during 4 years. History: first pregnancy 5 years ago ended artificial abortion. According to the data vaginal examination and ultrasound examination (ultrasound) is established diagnosis: endometrioid cyst of the right ovary. Which optimal method of treatment ?

A. Anti-inflammatory therapy
B. Androgen therapy
C. Conservative therapy estrogen-progestogen drugs
D. Sanatorium- resort treatment
E. Operative laparoscopy *

3. (2018) 25-year- old patient complains of infertility and secondary amenorrhea. Objectively: excessive nutrition, phenomena hirsutism. Bimanual: uterus normal sizes, ovaries from both sides something enlarged, painless. The level of LH and testosterone is elevated, the ACTH test is negative. Put diagnosis:

A. Polycystic syndrome ovaries *
B. Adrenogenital syndrome
C. Two-sided chronic salpingo-oophoritis
D. Virilizing tumors ovaries
E. Syndrome of resistant ovaries

Practical lesson №5

Topic: Operative laparoscopy in emergency conditions in gynecology.

Aim: To systematize and deepen knowledge on the topic of practical training. To teach conduct assessment conditions of the patient with nev and detailed conditions in gynecology. Learn the examination plan patients with emergency. To form a clear idea about the examination before urgent surgical interventions. Learn the methods diagnostics, which are used to establish the causes of "acute " abdomen in gynecology. Get acquainted with the capabilities of modern endoscopic equipment in the diagnosis and treatment of emergency conditions in gynecology. Master the basic technique of endoscopic interventions in emergency gynecology. Determine indications and contraindications for operative laparoscopy in emergency conditions. Know the types of operative laparoscopic interventions in emergency situations. To study the main stages of operative laparoscopy in emergency conditions. Learn the plan for managing patients in the postoperative period.

Basic concepts: Ectopic pregnancy, ovarian apoplexy. Clinic, diagnostics, management tactics. Emergency aid. Preoperative preparation and management of the postoperative period.

Plan:

1. Reference level control knowledge (written work, written testing, online, frontal testing poll etc.).

Requirements for theoretical readiness students to perform practical classes.

Knowledge requirements:

- Skills communication and clinical examination the patient
- Ability determine list necessary clinical and laboratory and instrumental research and evaluate their results.
- Ability establish preliminary and clinical diagnosis disease
- Ability diagnose urgent state
- Ability determine tactics and provide emergency medical help
- Execute medical manipulation
- Ability to conduct medical documentation

List didactic units:

- Ectopic pregnancy. Clinic, diagnostics, management tactics
- Ovarian apoplexy. Clinic, diagnostics, management tactics.
- Ectopic pregnancy. Emergency aid.
- Ovarian apoplexy. Emergency aid.
- Preoperative preparation.
- Management of the postoperative period.

Typical situational tasks:

Task 1. A 26-year-old woman was brought to the hospital with complaints of sudden pain in the lower abdomen radiating to the thigh and rectum, nausea, dizziness, bloody dark discharge from the genital tract for a week, delay of menstruation for 4 weeks. The skin is pale. Symptoms of irritation of the peritoneum are determined in the lower abdomen, more on the right. When examined in mirrors: cyanosis of the mucous membrane of the vagina and cervix. Bimanual examination: the uterus and its appendages are not clearly defined due to sharp pain. The symptom of a "floating uterus" is detected, the posterior vault of the vagina is bulging and sharply painful. HCG test is positive. As a result of the preliminary clinical, laboratory and instrumental examination, a preliminary diagnosis was made: Right-sided broken tubal pregnancy by the type of tubal rupture. Intra-abdominal bleeding.

What volume of surgery is planned to be carried out in the treatment of this patient?

Standards of answers: 1. Laparoscopy, right-sided tubectomy, sanitation and drainage abdominal cavity

Task 2. D. 26 years old. Brought to the gynecological department department by ambulance assistance on 05/20/22 at 10 a.m. Two hours ago she was healthy, but suddenly appeared abrupt pain in the stomach and supraclavicular area, began vomiting, nausea, loss consciousness _ The last menstruation was 05/06/22, expired her was normal _ Objectively: pale, lethargic, pulse 116 bpm, BP – 70/40mm. mercury Art. The belly is swollen, in act breath does not take part. During palpation sharply painful, especially in the lower ones areas. It is noted here tension abdominal muscles Shttkin-Blumberg symptom positive _ Bimanual: rear vault overhangs, the uterus is normal size, movable, painful, due to pain hard palpable, applications in connection with sharp tension it was not possible to palpate the abdominal wall. Analysis blood: ESR 10 mm/h, leukocytes $9 \cdot 10^{9}$/l.

Diagnosis? Management and treatment plan.

Answer standard: Apoplexy ovary, mixed form. Intra-abdominal bleeding _ Anemia. Hemorrhagic shock of the II century. Necessary urgent laparoscopy. Resection ovary, hemotransfusion, treatment of shock, anemia are performed at the same time.

Typical test tasks:

1. Patient P., 23 years old, was urgently delivered from complaints of pain in the lower abdomen, more from the right, with irradiation in the rectum, dizziness. The above mentioned complaints appeared suddenly at night. The last menstruation 2 weeks ago. Objectively: leather cover pale, pulse - 92 beats / min., t - 36.6 C, arterial pressure 100/60 mm Hg. Art. Stomach something tense, slightly painful in the lower departments, symptoms irritation peritoneum weakly positive. Hemoglobin 98 g/l. What treatment method is most appropriate for this patient?

A. Laparoscopy, ovariectomy.
B. Conservative treatment.
C. Laparoscopy, ovary resection.
D. Laparotomy, ovariectomy.
E. Laparoscopy, adnexectomy.

2. A 28- year -old female patient, delivered from complaints of acute pain in the lower part of the abdomen It was short term dizziness _ Delay menstruation 2 months.

Skin pale, BP-90/50 mm Hg. art., pulse-110 bpm/ min. Stomach sharply painful in the lower departments. With vaginal examination: the uterus is enlarged. Promtov 's positive symptom. Case of the application increased, sharply painful _ Rear vault hangs over Was exhibited as usual _ diagnosis: Right-sided broken tubal pregnancy by type of pipe break. Hemoperitoneum. Hemorrhagic shock of the II century. Anemia. Which operative approach is the most expedient to perform in the treatment of this patient?

A. Abdominal.
V. Endoscopic.
S. Vaginal.
D. Simultaneous

3. A 17-year-old woman is bothered by sharp pain in the lower abdomen. Marks delay of menstruation for 2 weeks. Sex life during the year. She protected herself from pregnancy by interrupting sexual intercourse. Objectively: pale. Body temperature 36.6 ^{0} C, blood pressure 95/60 mm Hg, pulse 90 bpm. During a bimanual examination, a slightly enlarged uterus is determined, cervical excursions are painful, the appendages are not clearly contoured, the posterior vault is bulging. Discharge from the genital tract is dark-bloody, scanty. The most informative method:

A. Ultrasound examination of the pelvic organs.
B. General blood test.
C. Puncture of the abdominal cavity through the posterior vault of the vagina.
D. Colposcopy.
E. Laparoscopy.

Answers: 1 - C; 2 – B; 3 – E.

2. Questions (test tasks, tasks, clinical situations) for verification basic knowledge on the subject of the lesson.

Question:

1. Diseases that lead to urgent conditions in gynecology
2. Diagnostic methods used to establish the causes that led to urgent conditions in gynecology
3. Etiology, classification, clinical signs, methods of examination, methods of treatment of ovarian apoplexy.
4. Ectopic pregnancy, etiology, pathogenesis, diagnostic methods, differential diagnosis, clinic, treatment, prevention.
5. Indications, contraindications, conditions and technical features of operative laparoscopy in ovarian apoplexy.
6. Indications, contraindications, conditions and technical features of operative laparoscopy in case of ectopic pregnancy.
7. Therapeutic and diagnostic endoscopic methods in emergency conditions in gynecology.
8. Preparation and postoperative management of gynecological patients during urgent surgical interventions.

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

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

Interactive task:

Students are divided into 3 teams of 3-4 men each. After the given situational problem, we give the task:

The first team is to make a preliminary diagnosis and make a plan for examining the patient.

The second team is to draw up a treatment algorithm

The third team evaluates the correctness of the answers of the first and second teams and makes its corrections

Unusual situational tasks

Problem 1. A 32-year-old woman was brought to the hospital with complaints of sudden pain in the lower abdomen radiating to the thigh and rectum, nausea, dizziness, bloody dark discharge from the genital tract for a week, delayed menstruation for 5 weeks. The skin is pale. Symptoms of irritation of the peritoneum are determined in the lower abdomen, more on the right. In the mirrors: cyanosis of the mucous membrane of the vagina and cervix. Bimanual examination: the uterus and its appendages are not clearly defined due to sharp pain. The symptom of a "floating uterus" is detected, the posterior vault of the vagina is bulging and sharply painful.

1. **Previous diagnosis?**
2. **2. Examination plan, treatment plan?**

Answer 1. Violated ectopic pregnancy by type of fallopian tube rupture. Intra-abdominal bleeding.

2. Ultrasound of the pelvic organs, determination of hCG in blood plasma, detailed blood analysis, general analysis of urine, laparoscopy. Operative treatment in emergency order. Tubectomy or tubotomy with enucleation of the fetal egg.

Task 2. An 18-year-old woman was admitted to the hospital with complaints of gradually increasing pain in the lower abdomen for 12 hours, weakness, nausea.

From the anamnesis: menstruation from the age of 14 to 3-4/26-28. Last menstruation 2 weeks ago. Sex life during the year. Not pregnant. Prevented pregnancy by interrupted sexual intercourse.

Objectively: the skin and mucous membranes are pale, T-36.6 ° C, BP-95/60 mm Hg. art., pulse-90 beats /min. The abdomen is tense, painful in the lower parts. Positive symptoms of irritation of the peritoneum in the lower abdomen are determined.

In the mirrors: the mucous membrane of the vagina and cervix is bluish.

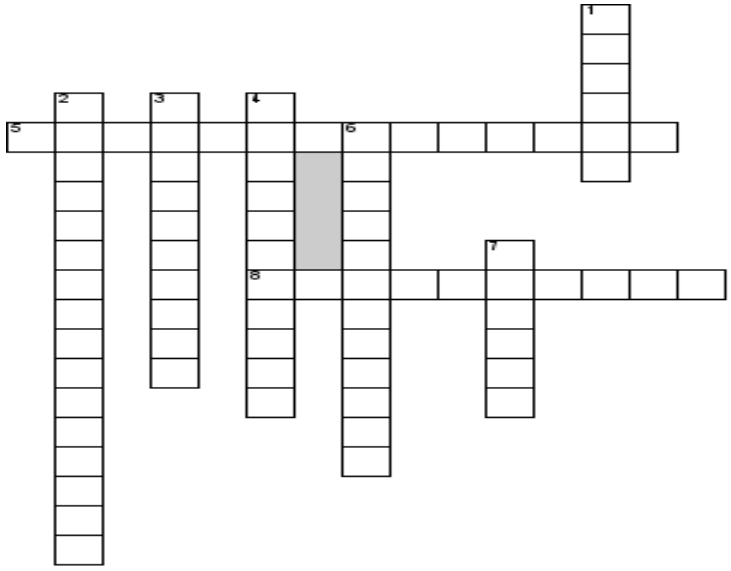
Bimanual examination: The uterus is slightly enlarged, its displacement is painful. The appendages are not clearly contoured due to the sensitivity of the study, the posterior arch is bulging. Discharges from the genital tract are dark-bloody, scanty.

Make an algorithm of the doctor's actions.

Answer standard:

1. Urgent hospitalization in the gynecological department
2. Intensive therapy
3. Therapeutic and diagnostic laparoscopy.

Unusual test tasks:



Horizontally
5. Characteristic changes of the endometrium during ectopic pregnancy
8. Bleeding with a violation of the integrity of the ovarian tissue, accompanied by bleeding into the abdominal cavity, is this?

Vertically
1. Occurs when blood circulation in the tumor is disturbed, does the inflammatory process occur a second time?
2. Pelvic peritonitis
3. Sharply painful menstruation
4. Symptom of intra-abdominal bleeding
6. Operative access for intra-abdominal bleeding
7. Changes in the blood formula during intra-abdominal bleeding

Answers: 5- decidualization ; 8- apoplexy; 1- necrosis; 2 pelvioperitonitis ; 3- dysmenorrhea; 4- Kuhlenkampf ; 6-laparoscopy; 7-anemia.

3.2 Recommendations (instructions) regarding implementation tasks (professional algorithms, orienting cards for formation practical skills and abilities etc.).

Table. Diagnostic signs of various forms of tubal pregnancy

Clinical signs	**Progressive ectopic pregnancy**	**Tubal miscarriage**	**Rupture of the fallopian tube**
Signs of pregnancy	Positive	Positive	Positive

General condition sick	Satisfactory	It periodically worsens, short-term loss of consciousness, long periods of a satisfactory state	Colaptoid condition, clinic of massive blood loss, progressive deterioration of the condition
Pain	Missing	The nature of attacks that are periodically repeated	Appears in the form of an acute attack
Allocation	Absent or minor bleeding	Dark-colored blood discharge appears after an attack of pain	Absent or minor bleeding
Vaginal research	The uterus does not correspond to the period of delay of menstruation, a retort -shaped formation is determined next to the uterus, painless, vaults are free	The same, soreness when the uterus is displaced, education without clear contours, posterior vault smoothed out	The same symptoms of a "floating uterus", tenderness of the uterus and appendages on the affected side, overhang of the posterior vault
Additional examination methods	Ultrasound, determination of the bhCG level, laparoscopy	Laparoscopy	Not held

Blood group determination algorithm.

Neobh and dny toolkit	White enamel plate, set standard serum, glass or 3 glasses sticks _	

Sequence of actions	1. On a white enameled plate, apply one drop of standard serums of two series in the recesses with the corresponding markings-0(I); A(II); B(III). 2. In a separate depth apply sprat drops of blood the patient 3. To each drops serum add one at a time drops of blood patient and stir separate glass stick or by the edge glass _ 4. They read the result. If agglutination not in any drops, group of blood patient - the first; if agglutination absent in the second drops-group of blood - second; if the third group of blood sick the third When appropriate of blood patients until four groups agglutination appears in everyone drops _	When mixing blood, it is important to use a different edge of the glass for each drop.

Execution algorithm practical skills

Bimanual (vaginal) examination:

1) greet the patient ;
2) identify patient (name, age);
3) to inform the patient about the need carrying out research ;
4) to explain to the patient, how the research is conducted ;
5) get permission to carry out research ;
6) wash hands;
7) put on examination gloves;
8) first and second fingers spread the left (right) hand big labia, average place the finger of the " dominant " hand at the same level of the posterior commissure, carefully click on it to _ open entrance to the vagina ;
9) carefully and slowly enter the medium finger, then indicatory finger in the vagina along the back wall to vault and cervix, fourth and fifth bring the fingers to the palm, the thumb lead to the top;
10) to determine length vaginal parts cervix in centimeters;
11) to determine consistency cervix (dense, soft);
12) to determine permeability external eye cervical canal (closed, passes tip finger);
13) to evaluate pain excursions cervix ;
14) second palm carefully put on the stomach (above the symphysis) and moderately press to determine the bottom of the uterine body ;
15) bring out the body of the uterus between with two hands and determine:
    - relative position of the uterus cervix (anteflexio, retroflexio);
    - dimensions uterine bodies (normal, reduced, enlarged);
    - consistency body of the uterus (dense-elastic, soft, compacted);

- personalty body of the uterus (relatively mobile, limited mobile);
- sensitivity during palpation (painful, painless);

16) to place fingers in the bottom of the right lateral arch and using palpate the right vaginal area with both hands vault and right appendages of the uterus, determine their size, mobility and soreness ;
17) to place fingers in the bottom left lateral vault and using palpate both hands the left vaginal vault and left appendages of the uterus, determine their size, mobility and soreness ;
18) to determine capacity vaginal vault ;
19) to inform the patient about the results research ;
20) thank the patient ;
21) withdraw inspection gloves;
22) wash hands

I perform laparoscopy in the classical way methodology, which includes the following the main ones stages:

- processing operating field
- imposition uterine cannulas
- imposition pneumoperitoneum
- introduction the first trocar and the beginning of the examination bodies abdominal cavities (diagnostic stage laparoscopy)
- introduction additional trocars for manipulators
- deepened revision bodies abdominal cavities
- operative stage laparoscopy
- final stage laparoscopy - removal of the macropreparation, washing abdominal cavities, control of hemostasis, removal of gas and instruments
- imposition single seams or brackets in places punctures on the skin.

When performing laparoscopy adhere to general rules of conduct operational manipulations.To control hemostasis during laparoscopic procedures interventions use the same methods as in open surgery: electrocoagulation of blood vessels, clipping them, sewing and applying knotted seams, sewing with the help of sewing machines.In the majority cases creation pneumoperitoneum perform in a closed way with the help of needles Veresha, which is injected into the abdomen cavity slightly below the umbilicus a ring The trocar is inserted through the incision skin, with moderate pressure, at an angle of 90 °to the peritoneum, and at this moment turn upwards by 45 in °one movement. After introduction of the main trocar stylet it taken out and in the abdomen cavity a laparoscope is inserted. The patient is transferred to the position Trendelenburg and examined abdominal cavity, including the upper floor.

is open laparoscopy consists of the following stages: 1) mini-laparotomy, 2) introduction of a special trocar through a mini-laparotomy hole in the abdomen cavity, 3) fixations trocar sleeves to the front abdominal walls for her sealing, 4) creation pneumoperitoneum through the trocar sleeve.

Laparoscopic tubectomy: Operation technique: a pneumoperitoneum is typically

created. Additional trocars are introduced in the iliac and inguinal regions. After tightening with forceps, the fallopian tube is clamped with branches dissector and bipolar current is applied to it in the coagulation mode. At the same time, the fallopian tube is cut along the upper edge of the mesosalpinx with simultaneous hemostasis. The fallopian tube is pulled out of the abdominal cavity with a soft clamp through the extended contraperture to the left or right. Then the abdominal cavity and small pelvis are cleaned with an isotonic solution of sodium chloride, and cosmetic sutures are placed on the skin.

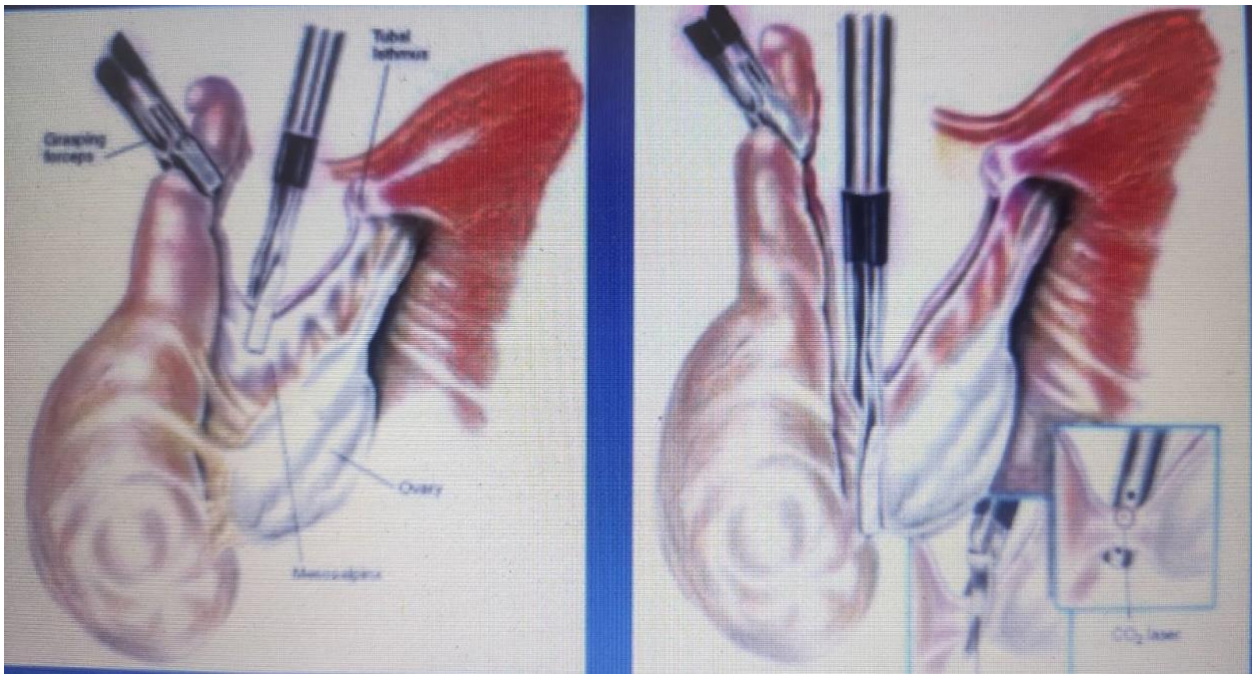


Fig. 1. Laparoscopic tubectomy. Stages of the operation.

Laparoscopic tubotomy with evacuation of the fetal egg

It is performed in case of ampullary tubal pregnancy if it is possible to preserve the fallopian tube (ectopic pregnancy progressing or interrupted according to the type of tubal abortion). Typically, a laparoscopy is performed, 2 trocars and a camera are inserted. After evacuation of the hemoperitoneum the ampullary part of the fallopian tube is fixed atraumatically clamp distal to the ovule. The fallopian tube is pulled out and its lumen is opened in the transverse direction with a hook above the fetal egg.

The fertilized egg is removed, the fallopian tube is washed with a physiological solution of sodium chloride. The need to use electrocoagulation for the purpose of hemostasis is determined by the presence of bleeding from the edges of the cut of the tube or the place of implantation of the fertilized egg.

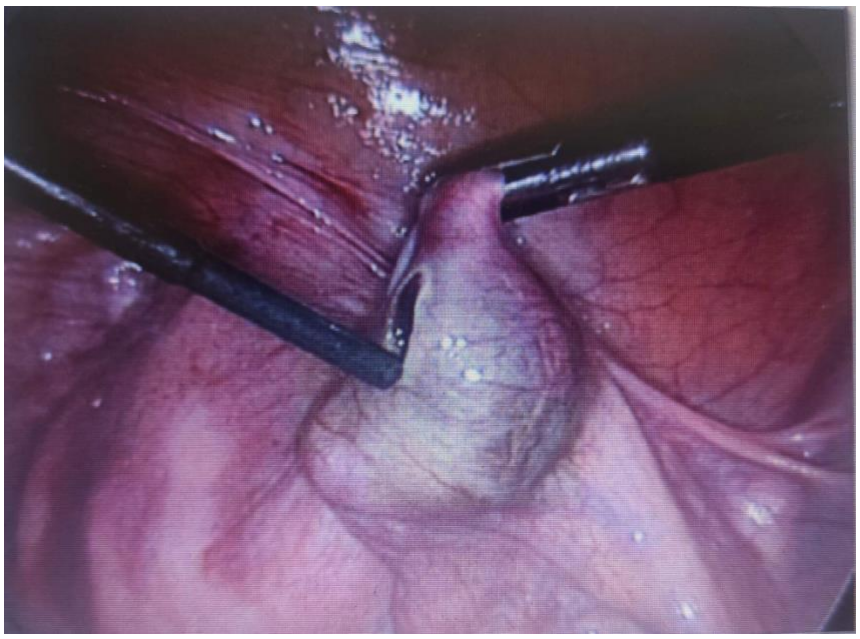


Fig. 2. Laparoscopic tubotomy, evacuation of the fertilized egg. Operation stage.

Resection of the ovary

It is carried out in case of ovarian apoplexy, polycystic ovary syndrome with the aim of creating benign ovarian formations. Excision of the ovary area is carried out with the help of a needle monopolar electrode. For subsequent hemostasis, a bipolar or argon plasma coagulator is used.

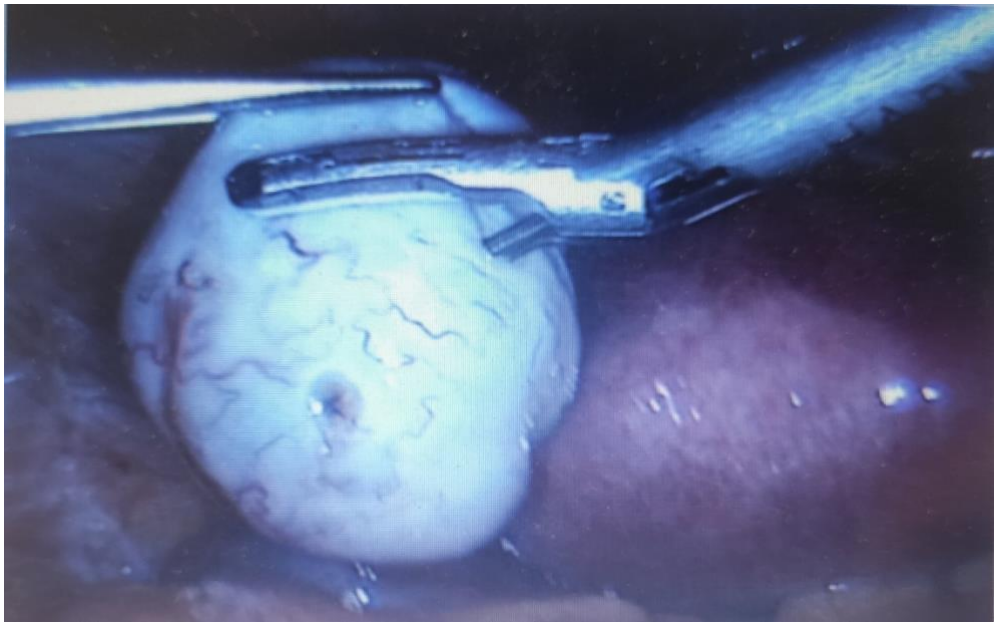


Fig. 3. Laparoscopic resection of the ovary. Operation stage.

Requirements for results work, including to registration.

1. Correctly collect the anamnesis of a patient with an "acute" abdomen.
2. Identify complaints that characterize the basis of the disease.

3. Determine, based on the anamnesis of the disease, the data of subjective and objective research, the signs and features necessary to identify the causes that led to the "acute" abdomen in gynecology.
4. Correctly interpret the data of laboratory and instrumental research methods.
5. Make a plan for the examination of a patient with ovarian apoplexy.
6. Make a plan for the examination of a patient with an ectopic pregnancy.
7. Carry out a differential diagnosis of "acute" abdomen.
8. Establish a diagnosis and make a treatment plan for a patient with ovarian apoplexy.
9. Establish a diagnosis and make a treatment plan for a patient with an ectopic pregnancy.
10. To be able to prepare the patient and postoperative management of gynecological patients during urgent surgical interventions.
11. To provide recommendations on the choice of the method of surgical treatment and the volume of surgical intervention in patients with ovarian apoplexy.
12. To provide recommendations on the choice of surgical treatment method and volume of surgical intervention in patients with tubal ectopic pregnancy.
13. Analysis and discussion of the results of the patient's examination.

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

Task 1. Patient B., 21 years old, came to the gynecological department with complaints of sharp pain in the lower abdomen radiating to the anus, dizziness that appeared suddenly after coitus. At home there was a short-term loss of consciousness.

Medical history: menstruation since the age of 13, established after 2 years, 7 days each, cycle 28–34 days, painless, moderate, irregular. Last menstruation 2 weeks ago. Ago.

Objective examination: general condition of the patient of moderate severity. The skin and visible mucous membranes are pale. The tongue is clean, moist. Body temperature is 37.1 °C. Pulse - 84 beats/min, rhythmic, blood pressure - 100/65 mm Hg. Art. The abdomen is moderately distended, moderately painful on palpation in the hypogastric region. Symptoms of peritoneal irritation are positive. Abdominal percussion - dulling of the sound. Pasternacki's symptom is negative on both sides. Physiological parameters are normal.

Gynecological examination. The cervix is not changed. The outer eye is closed. Bimanual examination: excursions of the cervix are sharply painful, Promptov's symptom is positive. The body of the uterus is in the anteflexio position, not enlarged, dense, sensitive to palpation, mobile. In the area of the right appendages of the uterus, a tugoelastic mass measuring 5*6*5 cm is palpable, sharply painful, sharply painful. The left uterine appendages are not palpable. The posterior vault of the vagina overhangs and is sharply painful upon palpation. Discharge from the genital tract is bloody, scanty. General blood analysis: hemoglobin – 94 g/l, erythrocytes – 2.9 · 1012/l, leukocytes – 5.4 · 1012/l.

Make a diagnosis.
Additional examination methods?
A treatment plan?

Standards of answers. Apoplexy of the right ovary, hemorrhagic form. Intra-abdominal bleeding. Hemorrhagic shock of the 1st degree. Anemia I st.
2. Survey plan: general clinical and biochemical laboratory tests (general blood test, general urine test, blood group and Rhesus factor, biochemical blood test, coagulogram), electrocardiogram; Ultrasound of the pelvic organs; express test with urine for hCG, laparoscopy
3. Treatment tactics depends from general condition of the patient, volume intra-abdominal bleeding, indicators hemodynamics. About the extent of surgical intervention in this women - laparoscopy, resection the left ovary _ Sanitation and drainage abdominal cavity _
Task 2. A 13-year-old girl complains of spasm -like pain in the lower abdomen, which appeared suddenly during physical education, nausea, vomiting.
From the anamnesis: menstruation since the age of 12, not established, abundant, painful. As a child, she suffered from childhood infections. Denies gynecological diseases.
Objectively: the skin and mucous membranes are pink. Pulse - 82 beats per minute, blood pressure - 100\60 mm Hg. Body temperature - 38ºC. When palpating the abdomen, the Stotkin-Blumberg symptom is positive in the right iliac region.
Virgo ! Gastrointestinal- rectal examination is impossible due to its sharp pain.**What studies are most informative for making a diagnosis?**
Reply
1. Ultrasound of the pelvic organs.
2. Laparoscopy of the pelvis and abdominal cavity.
3. Computed tomography of the pelvic organs.
Task 3. A 34-year-old patient came to the hospital with complaints of acute pain in the lower abdomen, nausea, vomiting. 6 months ago, during the examination, the gynecologist suspected the presence of a right ovarian cyst, but the patient refused the examination. Last menstruation 3 weeks ago, on time. She considers herself sick for 2 weeks, when cramp -like pain in the lower abdomen first appeared. There was no dizziness, she did not return to the doctor.
From the anamnesis: she was treated for inflammation of the uterine appendages.
Objectively: general condition of moderate severity. Temperature 37.7 ° C, pulse 86 bpm. AT-130/90mm Hg. Art. The tongue is coated, the abdomen is moderately distended, the Shchotkin - Blumberg symptom is positive in the lower abdomen.
Bimanual examination: attention is drawn to sharp pain when the cervix is displaced. To the right of the uterus, a 4x5 cm, painful, elastic mass can be palpated. On the left, applications are not defined. Vaults are deep, palpation of the right vault is painful. Vaginal discharge - white, moderate. Preliminary diagnosis: Torsion of the pedicle of the tumor of the right ovary. What volume of surgery should be performed in the treatment of the patient?
Answer standard: In this clinical case, treatment should be started with laparoscopy. The scope of the operation depends on the state of the applications and structures that have fallen into disarray. Detorsion is performed and the condition of applications after detorsion is evaluated. In the absence of signs of necrosis and the appearance of positive nutritional characteristics: pink color of the mucous membrane, moisture of

the mucous membrane, pulsation of blood vessels - at this stage, the surgical intervention is completed. If signs of necrosis appear - adnexectomy. If the omentum or loops of intestines are twisted, their viability and further tactics are evaluated. In the case of necrosis - resection of the omentum, resection of the intestine with anastomosis.

Test tasks KROK-2:

1. (2018) A woman was delivered by ambulance with cramp-like pain in the right iliac region that arose after a delay in menstruation, radiating into the rectum. bloody secretions from the genital tract. Objectively: heart rate contractions - 100/ min., arterial pressure - 90/60 mm Hg. The skin is pale. Stomach painful on palpation, positive symptom of Shtokkin-Blumberg. With gynecological research - landslides neck painful, right appendages enlarged, painful, rear vault overhangs, selection bloody _ Put previous diagnosis:

A. Sharp right-sided adnexitis
B. Appendicitis
C. Abortion in progress
D. Apoplexy of the right ovary
E. Pozamatkova pregnancy that _ interrupted

2) A woman complains of a sudden pain in the lower abdomen radiating to the anus, nausea, dizziness, bloody dark secretions from the genital tract for a week, delay of menstruation for 4 weeks. Symptoms irritation peritoneum positive _ In the mirrors: bluishness mucous shells vagina and cervix. With bimanual research the symptom " uterus that floats, swelling and soreness _ rear and right side the vault vagina _ Most probable diagnosis ?

A. Acute appendicitis.
B. Apoplexy ovary _
S. Sharp right-sided adnexitis.
D. Twist the legs tumors ovary _
E. Violated ectopic pregnancy _

3) A woman disturbs acute abdominal pain, increase _ temperature body up to 38.0°C. Knows about availability uterine fibroids for 3 years. Symptoms irritation peritoneum positive in the lower ones departments of the abdomen. Leukocytes 10.2 T/l, ESR 28 mm/h. With bimanual research the body of the uterus is enlarged to 8-9 weeks pregnancy, on the front surface - sharply excruciating fibroid node the size of 4x4 cm, the appendages of the uterus have not changed. Ultrasonic research confirms availability subserous fibroid node _ Which diagnosis most likely ?

A. Internal endometriosis _
V. Tuboovarian a tumor
S. Myomatous necrosis node _
D. Acute adnexitis.
E. Perimetritis.

4) In the gynecological department a 20- year -old patient came with complaints about sharp pain in the lower abdomen after physical load _ The last menstruation 2 weeks ago. With vaginal examination of the uterus is not enlarged, painless, on the left appendage sharply painful during palpation that _ makes it difficult research. Promtov's

symptom positive _ Rear vault looming, painful. Pulse 96 bpm, blood pressure 100/60 mm Hg. About which Are we talking about pathology ?
A. Sharp nearside salpingo-oophoritis.
B. Apoplexy the left ovary _
S. Pyosalpinx to the left
D. Disrupted left-sided tubal pregnancy.
E. Tumor the left ovary

5) (2019) The patient is 39 years old with complaints of acute pain in the lower abdomen, vomiting, accelerated urination _ During examination: abdomen moderately inflated, positive symptom of Shtotkin-Blumberg. Pulse 88 per minute, body temperature 37°C. With bimanual examination: the body of the uterus is dense, not enlarged, mobile, painless, on the right and in front palpable from the uterus formation 6x6 cm in size, tight elastic consistency, sharp painful when shifting ; appendages are not defined on the left ; vault free ; selection mucous _ An additional research method ?
A. X- ray television hysterosalpingography.
B. Excretory urography.
C. Transvaginal e hography.
D. Puncture abdominal cavity through the back vault vagina _
E. Computer room tomography

Practical lesson No. 6

Topic: Operative laparoscopy for benign tumors of the female genital organs.

Aim: Students need to learn the main etiological and pathogenetic factors of tumor diseases of the female genital organs. Learn how to plan a comprehensive examination of patients with benign tumors of the female genital organs. To learn to analyze the data of laboratory and instrumental methods of examination of patients with benign processes of the genitals , to choose the correct tactics for managing the data of patients. Know the types and main stages of operative laparoscopic interventions and be able to determine the volume of surgical intervention in the treatment of patients with benign tumors of the female genital organs.

Basic concepts: Tumors and tumor -like formations of uterine appendages. Ovariectomy. Resection of the ovary. Tubectomy. Adnexectomy. Myoma of the uterus. Conservative myomectomy. Hysterectomy. The main stages of the operation. Performance technique. Preoperative preparation and management of the postoperative period.

Plan:

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

Requirements for students' theoretical readiness to perform practical classes.

Knowledge requirements:

- communication skills and clinical examination of the patient.
- the ability to evaluate information about the diagnosis using a standard procedure, based on the results of laboratory and instrumental studies.
- the ability to determine the list of necessary clinical and laboratory and instrumental studies and the evaluation of their results.
- the ability to identify the leading clinical symptom or syndrome: amenorrhea, anemic syndrome, abdominal pain, pallor, hemorrhagic syndrome, dysmenorrhea , uterine bleeding.
- the ability to establish a preliminary diagnosis, carry out differential diagnosis and determine the clinical diagnosis of the disease: abnormal uterine bleeding, benign and precancerous neoplasms of the female genital organs.
- the ability to maintain medical documentation according to standard requirements (medical history of a gynecological patient) in the conditions of a health care institution or its unit.

List of didactic units:

- Tumors and tumor -like formations of uterine appendages
- Ovariectomy
- Resection ovary
- Tubectomy

- Adnexectomy
- Myoma of the uterus
- Conservative myomectomy
- Hysterectomy
- The main ones stages operations
- Machinery performance
- Preoperative preparation and management postoperative period

Typical situational tasks:

Task 1.

A 40-year-old woman consulted a gynecologist. Complaints of periodic pain in the lower abdomen, accelerated urination. Menstruation from the age of 13, for 5 days, after 28 days, painless, regular, moderate. Last menstruation 3 weeks ago. There were 2 pregnancies, 2 deliveries, 0 abortions. Bimanual examination revealed: the body of the uterus is of normal size, dense, bumpy, a dense round formation on the leg up to 5 cm can be palpated along the front wall, painless. The appendages of the uterus on both sides are not enlarged, painless. Secretions from the genital tract are mucous, moderate. According to ultrasound, it is a subserous uterine myoma. What method of treatment should be offered to a woman?

Answer standard: Laparoscopy. Conservative myomectomy.

Task 2.

A 34-year-old woman turned to a doctor with complaints of periodic pulling pain in the lower abdomen, more on the left side. It is known from the anamnesis that the woman last consulted a gynecologist 2 years ago, when a tumor of the left ovary was diagnosed. Surgical treatment was offered, which the patient refused. Menstruation from the age of 12, moderate, every 5-6 days, after 30 days, painless. 2 pregnancies, 1 childbirth, 1 abortion.

During a gynecological examination in mirrors: the cervix is cylindrical in shape, the uterine cavity is slit -shaped. Bimanual examination: the body of the uterus is not enlarged, painless, dense, mobile. The appendages on the left are palpable a tumor - like formation 6 cm in diameter, sensitive to palpation, mobile. Applications on the right without features. Secretions from the genital tract are mucous.

During the follow- up examination, a preliminary diagnosis was established: Tumor of the left ovary. The results of additional laboratory and instrumental research methods indicated a benign course of the process. What method of treatment would you suggest to a woman?

Answer standard: Surgical treatment in volume - Laparoscopy. Enucleation of the tumor of the left ovary.

Typical test tasks:

1. Adnexectomy is:

a) removal of the fallopian tube;
b) removal of the ovary;
c) removal of the uterus;
d) removal of the ovary and fallopian tube;

e) removal of the cervix.
2. Endoscopic methods include:
a) colpocytology;
b) metrosalpingography;
c) l aparoscopy;
d) hysterography;
e) probing uterine cavity;
3. In a 28-year-old woman, a bimanual examination revealed: the body of the uterus of normal size, on the front wall - a dense rounded formation on the leg, connected to the uterus, up to 5 cm in diameter, painless, appendages without features. With the help of ultrasound, the diagnosis of subserous uterine myoma was confirmed. What method of treatment should be offered?
a) Laparoscopy , myomectomy;
b) Laparoscopic assistance of vaginal hysterectomy;
c) Laparoscopy , supracervical hysterectomy;
d) Vaginal hysterectomy;
e) Laparotomy , myomectomy;
Correct answers : 1 – D, 2 – B, 3 – A.

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

Question:

1. Therapeutic and diagnostic endoscopic methods of treatment in gynecology.
2. Laparoscopy. Indications and conditions for diagnosis and treatment of benign pathologies of the female genital organs, technique, complications.
3. Contraindications and complications laparoscopic operations on women genitals.
4. Tumors and tumor -like formations of uterine appendages. Types of operative interventions on the appendages of the uterus.
5. Ovariectomy . The main stages of the operation. Performance technique.
6. Resection of the ovary. The main stages of the operation. Performance technique.
7. Tubectomy . The main stages of the operation. Performance technique.
8. Adnexectomy . The main stages of the operation. Performance technique.
9. Myoma of the uterus. Diagnostic methods and types of surgical interventions in the treatment of benign uterine pathology.
10. Conservative myomectomy. The main stages of the operation. Performance technique.
11. Hysterectomy. The main stages of the operation. Performance technique. Preoperative preparation and management of the postoperative period.

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.).

Interactive task:

The students of the group are divided into 3 subgroups of 4-5 people each. We give the task:

And the subgroup - to make a preliminary diagnosis.
Subgroup II – to draw up a management plan for a gynecological patient.
Subgroup III – evaluates the correctness of the answer of subgroups I and II and makes its corrections.

Unusual situational tasks:

Task 1.

Patient O, 45 years old, consulted a gynecologist about profuse menstruation, turning into abnormal uterine bleeding, pulling pain in the lower abdomen for the past 2 years. It is known from the anamnesis that the woman is on the dispensary register with a gynecologist for uterine fibroids. Menstruation since the age of 13, abundant, painless, irregular for the last 2 years. Last menstruation 10 days ago. 3 pregnancies, 1 childbirth, 2 medaborts . Bimanual examination revealed: the body of the uterus is irregularly shaped, enlarged up to 10 weeks of pregnancy, dense, bumpy due to multiple nodes, mobile. The appendages of the uterus on both sides are not enlarged, painless. Mucous discharge from the genital tract. According to ultrasound, it is multiple myoma of the uterus.
ZAC – hemoglobin 92 g/l, erythrocytes – 3.2 x 1012/l.
Install the previous one. Determine further tactics of examination and treatment.
Answer standard: Multiple myoma of the uterus. KHAMK Mild anemia.
necessary to conduct an additional biopsy of the endometrium .
Treatment: surgical laparoscopy , hysterectomy without appendices.

Task 2.

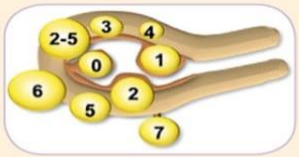
to the gynecologist with complaints of pulling pain in the lower abdomen, more on the right. Menopause is 12 years old. Pregnancies - 4, 2 deliveries, 2 medaborts . During the examination, a tumor of the right ovary was diagnosed. Oncomarkers CA-125, HE4, the ROMA index are within normal limits. FGS, colonoscopy , mammography - without pathology. In the biopsy endometrium - endometrium is atrophic. The patient was offered surgical treatment. Determine the volume of surgical intervention:
Answer standard: Laparoscopy. Right-sided adnexectomy .

Unusual test tasks:

1. With single subserous nodes on the leg are mainly:
a) conservative treatment of COC, observation;
b) node removal by laparoscopic access using bipolar electric energy;
c) laparoscopic access with double-row vicryl sutures;
d) laparotomic access with double-row vicryl sutures;
e) laparotomy access with the imposition of a single-row vicryl suture.
2**.** Myomectomy with interstitial location of nodes preferably perform:
a) laparoscopic access using bipolar bed coagulation;
b) laparoscopic access with the application of tantalum staples;
c) laparoscopic access with the imposition of a single-row vicryl suture;
d) laparotomic access with double-row vicryl sutures;
e) laparotomy access with the imposition of a single-row vicryl suture.
3. The choice of surgical access depends on:
a) the size of the uterus;
b) localization of myomatous nodes;

c) preoperative hormonal preparation;
d) equipping with endoscopic equipment and experience of the surgeon;
e) all answers are correct.
4. For benign tumors of the ovaries, the following is not performed:
a) salpingolysis .
b) ovariectomy .
c) resection of the ovary.
d) tumor excision.
e) adnexectomy .
5. A 40-year-old woman came to the women's consultation with complaints of irregular menstrual cycle in the form of abnormal uterine bleeding for six months, pulling pains in the lower abdomen, weakness. During the gynecological examination, it was found: the body of the uterus was enlarged up to 12 weeks of pregnancy, dense, mobile, painless. In the blood: Hb - 90 g/l. What kind of research must be done before choosing treatment tactics?
A) Hysteroscopy with biopsy of the endometrium .
B) Culdoscopy
) Metrosalpingography
D) MRI of the pituitary gland
D) Fibrogastroscopy .
Correct answers: 1 – B, 2 – B, 3 – D, 4 – A, 5 – A.

3.2 Recommendations (instructions) for performing tasks (professional algorithms, orienting maps for the formation of practical skills and abilities, etc.). Classification of uterine fibroids (FIGO , 2011)



Суб-мукозная	0	Узел на ножке полностью в полости матки
	1	<50% узла расположено интрамурально
	2	≥50% узла расположено интрамурально
Другие	3	100% интрамурально, но контактирует с эндометрием
	4	Интрамуральный узел
	5	Субсерозный ≥50% интрамуральный
	6	Субсерозный <50% интрамуральный
	7	Субсерозный на ножке
	8	Другие (например, шеечный узел, паразитарные образования и др.).

Гибридная лейомиома (включает эндометрий и серозную оболочку)	В этом случае две цифры указываются через дефис. При этом первая цифра соответствует отношению узла к эндометрию, вторая — отношению узла к серозной оболочке.	
	2–5	Узел расположен субмукозно и субсерозно. Субмукозно выступает менее половины диаметра узла и субсерозно выступает менее половины диаметра узла.

ling to standard principles according to the order of the Ministry of Health of Ukraine No. 620 dated 12.29.2003.

Standard examination gynecological patients for planned endosurgery intervention (in accordance with the order of the Ministry of Health of Ukraine No. 620 dated 12.29.2003)

1. General physical examination
2. Definition groups blood and Rh factor
3. Analysis blood for RV, HIV, Hbs -a/g
4. General analysis blood and urine
5. Sugar of blood
6. Bacteriological analysis secretions from sexual ways (urethra, cervical canal, vagina)
7. Biochemical analysis blood (general protein , creatinine , bilirubin , liver samples)
8. Coagulogram
9. Oncocytological research smears from the cervix and cervical canal or the result of histopathological examination research
10. Electrocardiogram
11. FG or radiography bodies chest cells
12. Review of the therapist
13. Review profile specialists according to indications
14. Ultrasonic research pelvic organs
15. Colposcopy

Standard examination gynecological patients before urgent surgical intervention (in accordance with the order of the Ministry of Health of Ukraine No. 620 dated 12.29.2003)

1. General physical examination
2. Group blood and Rh factor

Antibiotic prophylaxis conduct during induction of anesthesia by intravenous drip antibiotics . According to the testimony conduct repeated introduction antibiotics in the postoperative period period after 6-12 hours, and with infected people antibiotic therapy is carried out during operations .

Conducting algorithm laparoscopy

Laparoscopy conducted in the classical way methodology , which includes the following the main ones stages :

- processing operating field
- imposition uterine cannulas
- imposition pneumoperitoneum
- introduction the first trocar and the beginning of the examination bodies abdominal cavity (diagnostic stage laparoscopy)
- introduction additional trocars for manipulators
- deepened revision bodies abdominal cavities
- operative stage laparoscopy
- final stage laparoscopy - removal of the macropreparation, washing abdominal cavities , control of hemostasis, removal of gas and instruments
- imposition single seams or brackets in places punctures on the skin .

When performing laparoscopy adhere to general rules of conduct operational manipulations. To control hemostasis during laparoscopic procedures interventions use the same methods as in open surgery: electrocoagulation of blood vessels, clipping them, sewing and applying knotted seams, sewing with the help of sewing machines. In the majority cases creation pneumoperitoneum perform in a closed way with the help of needles Veresha , which is injected into the abdomen cavity slightly below the umbilicus a ring The trocar is inserted through the incision skin , with moderate pressure , at an angle of 90° to the peritoneum and at this moment it is turned in one movement up by 45°. After introduction of the main trocar stylet it taken out and in the abdomen cavity enter laparoscope . The patient is transferred to the position Trendelenburg and examined abdominal cavity , including the upper floor.

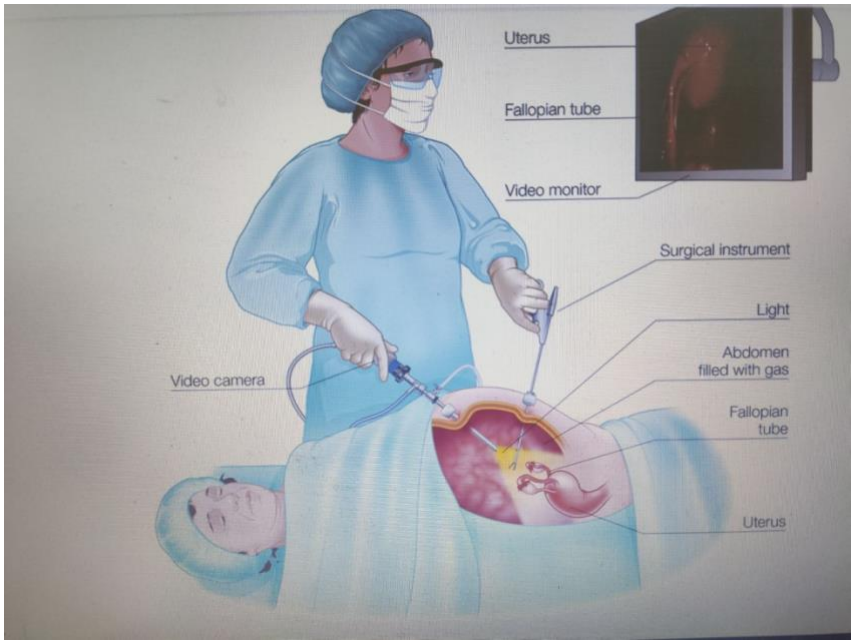


Fig. 1. Operative laparoscopy

Open laparoscopy consists of the following stages: 1) mini - laparotomy , 2) introduction of a special trocar through the mini- laparotomy opening into the abdominal cavity, 3) fixation of the trocar sleeve to the anterior abdominal wall for its sealing, 4) creation of pneumoperitoneum through the trocar sleeve.

Laparoscopic myomectomy

includes 4 main stages:

1. hydropreparation and extraction of the capsule (Fig. 2)
2. enucleation (removal) of the myomatous node (Fig. 3)
3. hemostasis of the vascular bed
4. suturing to restore the normal anatomy of the uterus (Fig. 4)
5. removal of a tumor from the abdominal cavity

Hydropreparation and extraction of the capsule. To facilitate allocation

hydropreparation of the myomatous node using a puncture needle and 0.25% adrenaline solution is used. This method also allows you to reduce the amount of blood loss during tissue dissection.

Different types of energy are used for dissection: electrocoagulator, laser, harmonic scalpel, argon beam and excision with scissors. The electroknife should be

slowly dipped into the body of the uterus until the whitish surface of the node appears and the capsule is identified, as in Figure 2.

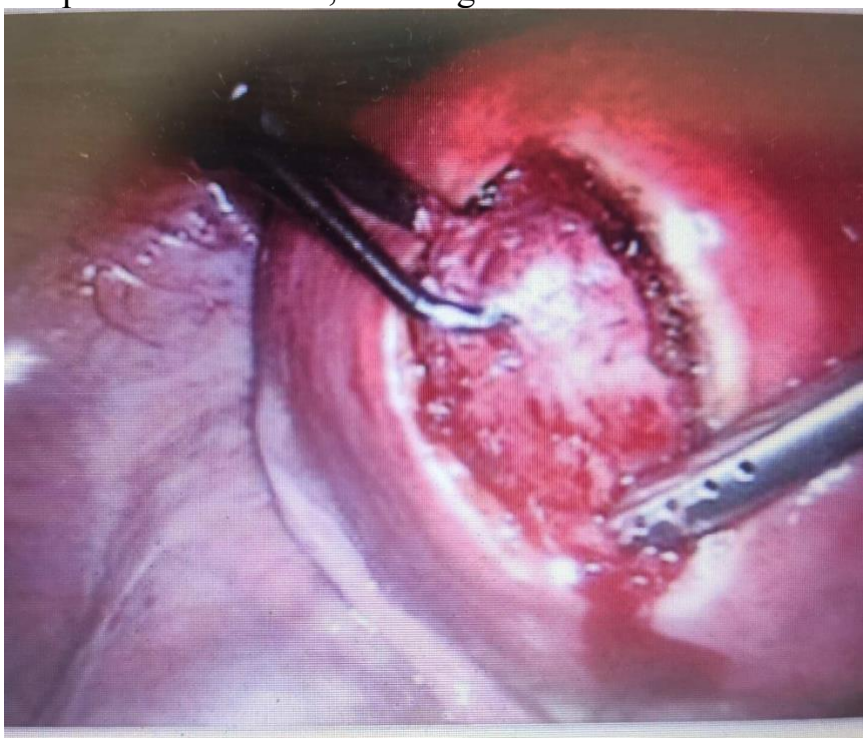


Fig. 2. Isolation of the myomatous node capsule.

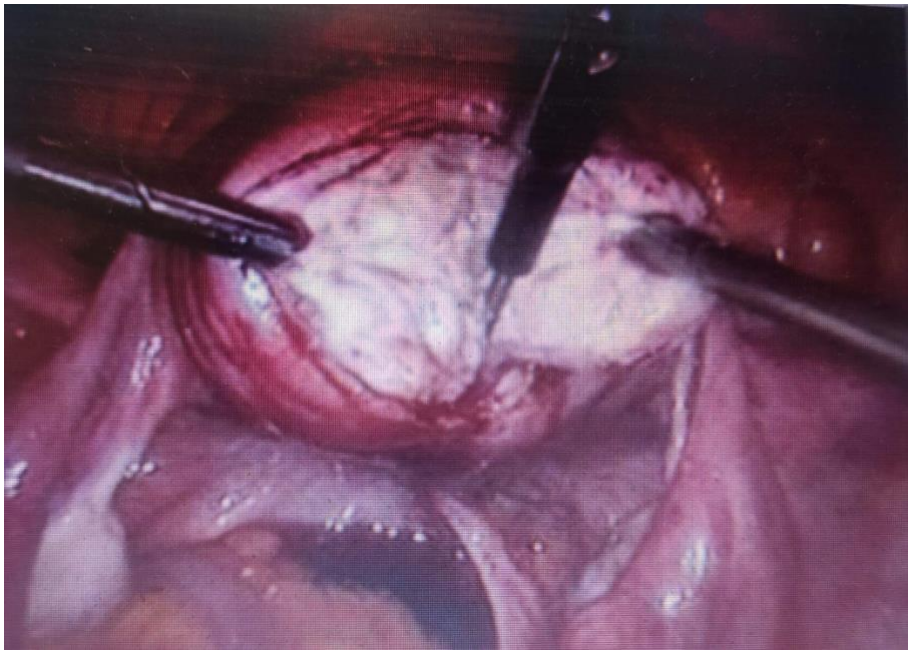


Fig. 3. Removal of myomatous node.

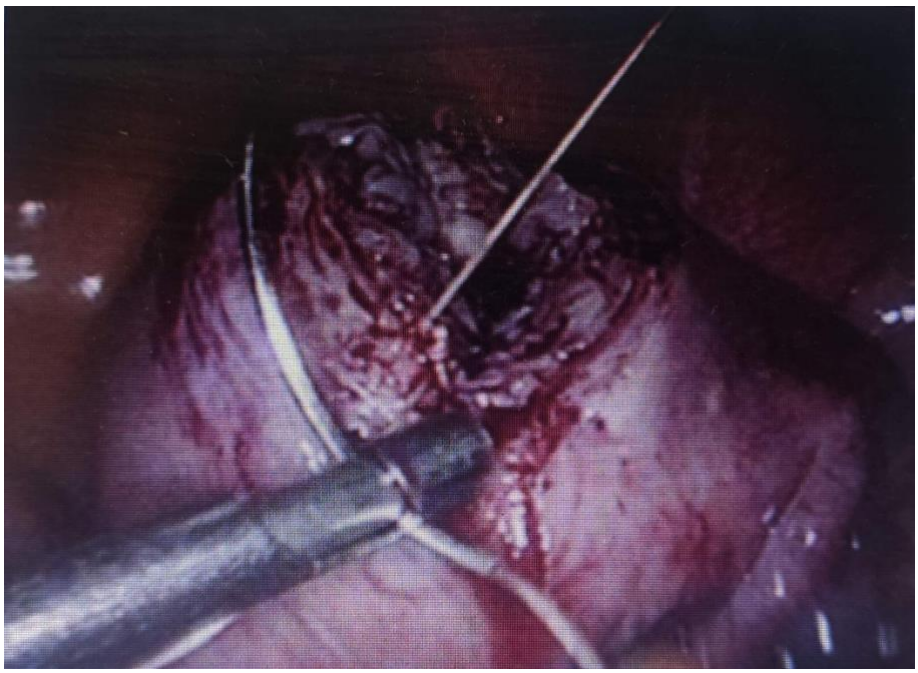


Fig. 4. Suturing the bed of the myomatous node.

Laparoscopic hysterectomy
Stages of the operation:
1) Section of the round ligaments of the uterus (Fig. 5)
2) section of the upper part of the ligamentous apparatus (Fig. 6)
3) bladder dissection (Fig. 7)
4) intersection of the lumbar and uterine ligaments
5) hemostasis of uterine vessels (Fig. 8)
6) cutting off the uterus from the walls of the vagina
7) withdrawal of the macropreparation

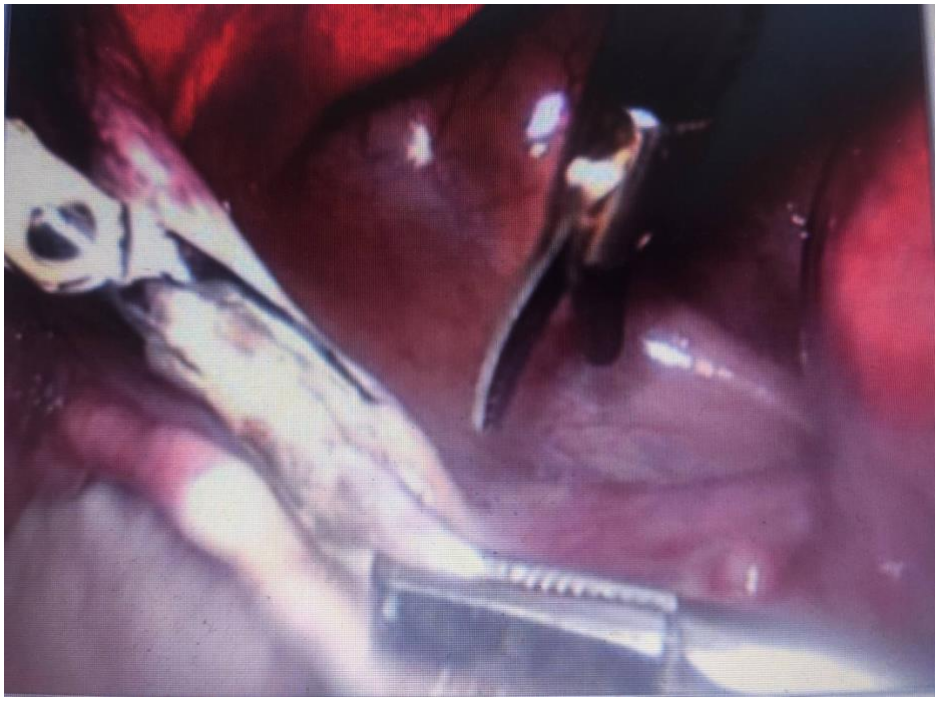


Fig. 5. Section of the round ligaments of the uterus.

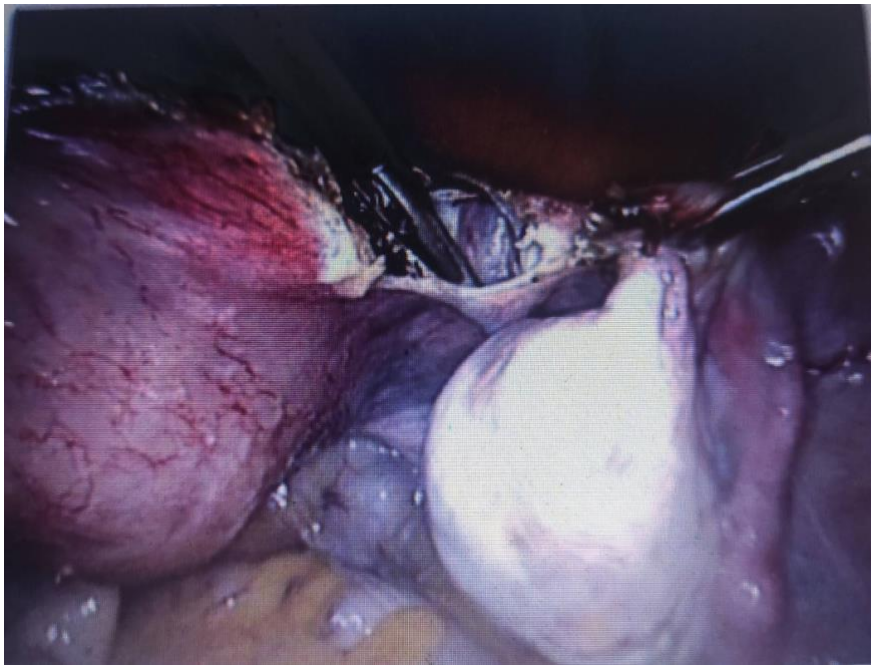


Fig. 6. Formation of a window in the broad ligament of the uterus.

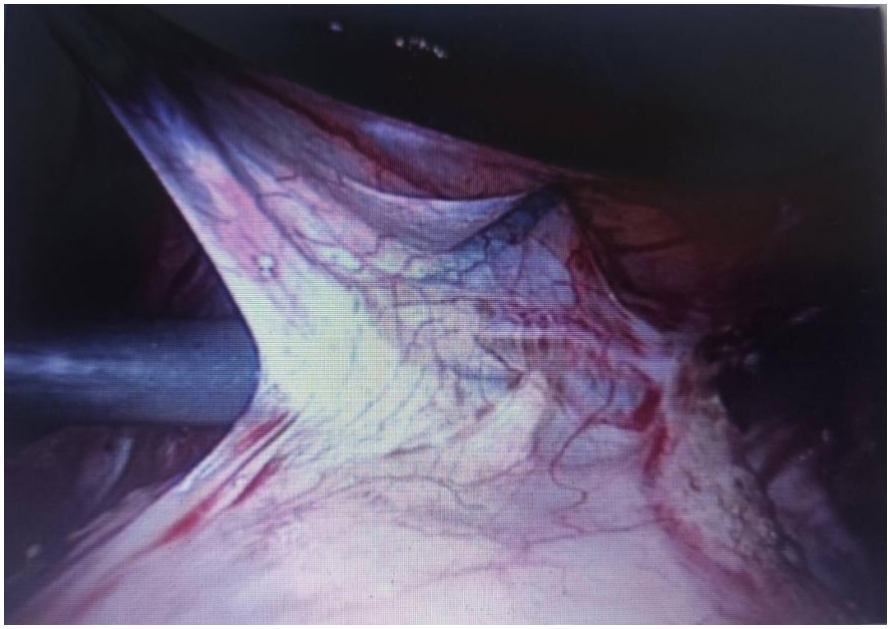


Fig. 7. Bladder dissection .

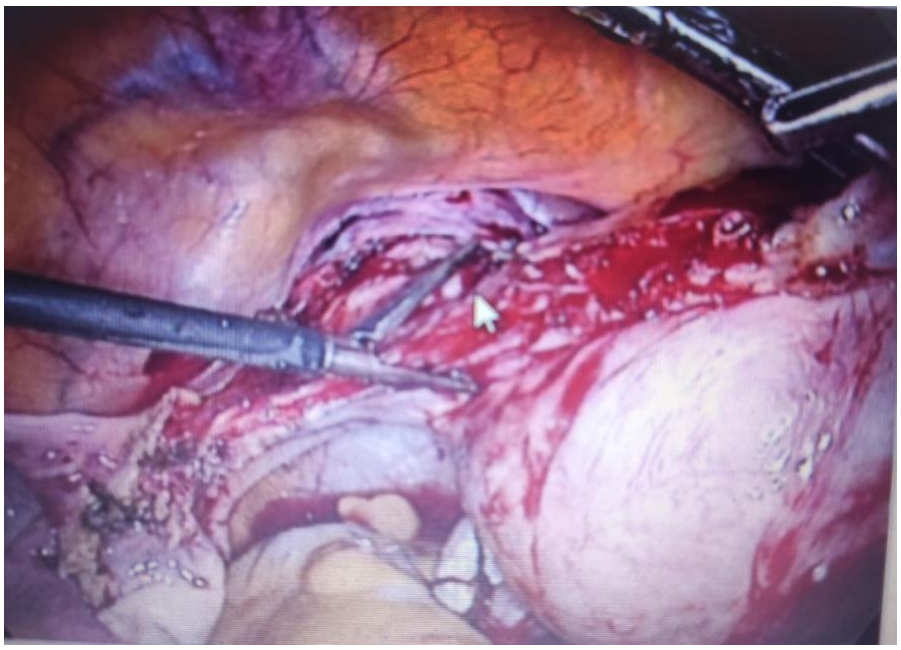


Fig. 8. Coagulation of uterine arteries.

Enucleation (extraction) of the ovarian tumor capsule (Fig. 9)

It is performed in the presence of ovarian neoplasms and consists in its removal while preserving healthy ovarian tissue.

The tissue of the ovary above the capsule of the tumor is dissected with scissors, the branches of which are separated, thereby expanding the space between the capsule of the tumor and the ovary.

The tissue of the ovary is dissected at the required distance for further manipulations. The tumor is excised bluntly and, after placing it in a special container, is evacuated from the abdominal cavity. Dissection of the capsule is carried out while it is in the container to prevent the spread of the tumor contents in the abdominal cavity. Hemostasis of the tumor bed is carried out with the help of electrocoagulation.

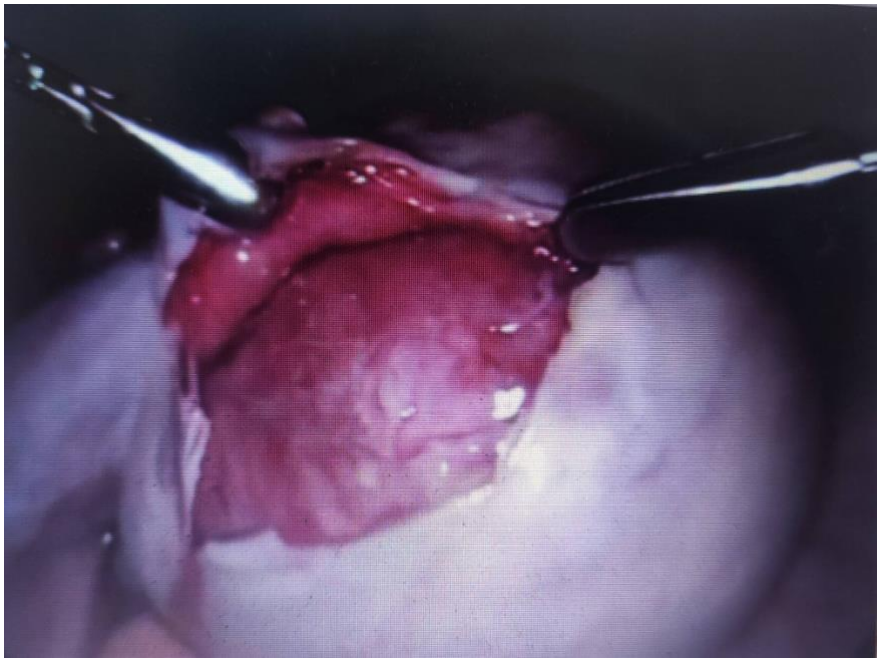


Fig. 9. Enucleation of the ovarian tumor capsule. Operation stage.

Algorithm for performing practical skills.

Bimanual (vaginal) examination:

1) say hello to the patient;
2) identify the patient (name, age);
3) to inform the patient about the necessity of conducting the study;
4) explain to the patient how the study is conducted;
5) obtain permission to conduct research;
6) wash hands;
7) put on inspection gloves;
8) with the first and second fingers of the left (right) hand, spread the labia majora, place the middle finger of the "dominant" hand at the level of the posterior adhesion, gently press on it to open the entrance to the vagina;
9) carefully and slowly insert the middle finger, then the index finger into the vagina along the back wall to the vault and cervix, bring the fourth and fifth fingers to the palm, bring the thumb to the top;
10) determine the length of the vaginal part of the cervix in centimeters;
11) determine the consistency of the cervix (dense, soft);
12) determine the patency of the external eye of the cervical canal (closed, a fingertip passes through);
13) to assess the painfulness of the excursion of the cervix;
14) the second palm should be carefully placed on the stomach (above the symphysis) and moderately pressed to determine the bottom of the uterine body;
15) take the body of the uterus between two hands and determine:

- the position of the uterus relative to the cervix (anteflexio, retroflexio);
- the size of the uterus (normal, reduced, increased);
- the consistency of the body of the uterus (tight-elastic, soft, compacted);
- mobility of the uterus (relatively mobile, limited mobility);
- sensitivity during palpation (painful, painless);

16) place your fingers in the bottom of the right lateral vault and, using both hands, palpate the right vaginal vault and right appendages of the uterus, determine their size, mobility and pain;
17) place your fingers in the bottom of the left lateral vault and, using both hands, palpate the left vaginal vault and the left appendages of the uterus, determine their size, mobility and painfulness;
18) determine the capacity of the vaginal vaults;
19) inform the patient about the results of the study;
20) thank the patient;
21) remove examination gloves;
22) wash hands

3.3 Requirements for results work , including to registration.

- Evaluate the results of additional research methods (laboratory, endoscopic, MRI, CT).
- Perform gynecological examination in simulation classes using high-tech simulators

- Be able to justify the diagnosis of a patient with benign tumors of the female genital organs on the basis of complaints, anamnesis, clinic, differential diagnosis of the thematic patient (standardized patient).
- Be able to provide recommendations on the choice of a method of surgical treatment
- To be able to justify the required amount of surgery for different types of uterine fibroids
- To be able to justify the required amount of surgery for various variants of ovarian tumors, depending on the nature of the tumor and the age of the patient.

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

Unusual situational tasks:

Task 1.

A 48-year-old patient complained about the fact that in the last 8-9 months menstruation has been very abundant, causing anemia, impaired working capacity. For 2 years, he has been under the supervision of a gynecologist for uterine fibroids. Objectively: the cervix is cylindrical, clean, open closed _ The body of the uterus is in a normal position , enlarged to 9–10 weeks pregnancy , with uneven surface , mobile , painless . Appendices from both parties are not defined. Parameters are free Vault deep _ Allocation mucous _ Preliminary diagnosis. Patient management tactics.

Answer standard: Myoma of the uterus. Chronic abnormal uterine bleeding. Anemia. Surgical treatment in the volume Laparoscopic assistance of vaginal hysterectomy without appendages.

Task 2.

A 24-year-old patient complains of pain in the lower abdomen, which worsens sharply before and during menstruation. He has been sick for about a year. By this time, the periods were normal. Sex life since 20 years. Two years ago, she gave birth to a child, childbirth and the postpartum period without complications. The general condition is not disturbed. T — 36.6°C, Ps — 86 beats /minute, AT-120/70 mm Hg . Art. Abdomen is soft, painless. When examined in mirrors: the neck is cylindrical, clean, the eye is closed. Bimanual: uterus of normal size, sedentary. To the right of the uterus, a tumor -like formation of 4 x 6 cm, fused with the uterus, painful on palpation is determined. On the left, appendages without pathology. Parameters are free. According to the ultrasound of the pelvic organs: a tumor -like formation of 4x6 cm. The conclusion is an endometrioid cyst of the right ovary. The patient was offered surgical treatment. Determine the volume of surgical intervention shown to the patient

Answer standard: Laparoscopy. Enucleation of the cyst capsule of the right ovary.

Test tasks KROK-2:

1. (2020) During the professional examination, it was established that a 23-year-old woman had no pregnancies. Bimanual examination revealed: the body of the uterus of normal size, on the front wall - a dense rounded formation on the leg, connected with the uterus, up to 6 cm in diameter, painless, appendages without features. With the help of ultrasound, the diagnosis of subserous uterine myoma was confirmed. What method of treatment should be offered?

A. Conservative myomectomy *

B. Amputation of the uterus

B. Defundation of the uterus
G. Extirpation of the uterus
D. High supravaginal amputation of the uterus
2. (2019) A 32-year-old woman turned to a doctor with complaints about the absence of pregnancy for 4 years. In the anamnesis: 5 years ago, the first pregnancy ended with an artificial abortion. According to vaginal examination and ultrasound examination (ultrasound), the diagnosis was established:* endometrioid cyst of the right ovary. What is the optimal method of treatment?
A. Anti-inflammatory therapy
B. Androgen therapy
B. Conservative therapy with estrogen - progestogenic drugs
G. Sanatorium-resort treatment
D. Operative laparoscopy *

3. (2019) A 40-year-old woman came to a women's consultation with complaints of irregular menstrual cycles in the form of hyperpolymenorrhea for six months, pulling pains in the lower abdomen, weakness. During the gynecological examination, the body of the uterus is enlarged up to 12 weeks of pregnancy, dense, mobile, painless. In the blood: Hb - 90 g/l. What pathology is most likely?
A. Cystoma of the ovary
B. Pregnancy
B. Myoma of the uterus*
D. Abnormal uterine bleeding
D. Cancer of the uterine body
4. (2017) In the course of the medical examination, it was established that a 23-year-old woman had no pregnancies. A bi -manual examination revealed: the body of the uterus of normal size, on the front wall - a dense rounded formation on the leg, connected with the uterus, up to 6 cm in diameter, painless, appendages without features. With the help of ultrasound, the diagnosis of subserous uterine myoma was confirmed. What method of treatment should be offered?
A. Conservative myomectomy *
B. Amputation of the uterus
B. Defundation of the uterus
G. Extirpation of the uterus
D. Vysoka supravaginal amputation of the uterus

5. (2016) A 48-year-old patient complains of heavy menstruation. She gave birth - 2, abortions - 2. She has not consulted a gynecologist in the last 2 years. Objectively: external genital organs without pathology, the cervix is cylindrical, clean. The body of the uterus is enlarged up to 14-15 weeks of pregnancy, uneven surface, mobile, painless. The vaults are deep. The appendages are not defined, the area of the appendages is painless. Parameters are free. Mucous discharge. What is the most likely diagnosis?
A. Myoma of the uterus*
B. Sarcoma of the uterine body

B. Pregnancy 14-15 weeks
H. Chorioepithelioma
D. Cancer endometrium

Practical lesson №7

Topic: "Endoscopy in obstetrics».

Aim. To master the technique of obstetric invasive diagnostic methods by performing laparoscopy. Learn the plan for examining a pregnant woman before laparoscopy. Get acquainted with the possibilities of modern endoscopic equipment in the diagnosis of feto-fetal transfusion syndrome, immunoconflict, ZVUR, fetal malformations. Master the basic technique of endoscopic interventions. Determine the indications and contraindications for laparoscopy in the diagnosis of this pathology. Familiarize yourself with and determine the technique of laparoscopy for fetoscopy, chorion biopsy, amniocentesis, placentacentesis, cordocentesis and fetal skin biopsy. To form a clear idea about the examination of patients before operative laparoscopy. Learn the plan for managing patients in the postoperative period.
Basic concepts: Fetoscopy, chorion biopsy, amniocentesis, placentacentesis, cordocentesis and fetal skin biopsy. Pregnancy and ovarian tumors.

Plan:
2. Requirements for students' theoretical readiness to perform practical classes.
Knowledge requirements:

- Communication and clinical patient examination skills;
- Ability to determine the list of necessary clinical and laboratory and instrumental studies and evaluate their results;
- Ability to establish a preliminary and clinical diagnosis of the disease;
- Perform medical manipulations;
- Ability to keep medical records.

List of didactic units:

- feto-fetal transfusion syndrome;
- immunoconflict;
- ZVUR;
- fetal malformations;
- fetoscopy, chorion biopsy, amniocentesis, placentacentesis, cordocentesis and fetal skin biopsy;
- pregnancy and ovarian tumors;
- indications and features of the operative laparoscopy technique during surgery.

Situational tasks

1. The firstborn has a Rhesus - negative blood type, no isoantibodies were detected. The man is Rh-positive. Antibodies were not detected during monthly monitoring. What should be the doctor's tactics?
Answer: Immunize a pregnant woman at 28 weeks of pregnancy and within 72 hours after childbirth.

2. 26-year-old pregnant woman, pregnancy II, 14-15 weeks. The first pregnancy ended with an abortion at 11-12 weeks. Women have O(I)Rh−, men have O(I)Rh+ blood group. What examinations should a woman undergo?
Answer: Determination of anti-Rhesus antibodies.

Test tasks

1. A 30-year-old woman gave birth to a child with an anemic-jaundic form of hemolytic disease during her second delivery. The woman's blood group is A(II)Rh−, the newborn's blood group is B(III)Rh+, the newborn's father is also B(III)Rh+. What is the most likely cause of immunoconflict?
A. Rhesus conflict
B. Antigen conflict A
C. Conflict over antigen B
D. Conflict over antigen AB
E. Conflict on AB0

2. A 28-year-old woman gave birth to a girl weighing 3,400 g, length 52 cm with manifestations of anemia and increasing jaundice during her second delivery. The blood group of the woman is B (III) Rh−, the father of the newborn is A (II) Rh+, the newborn is B (III) Rh+. What is the cause of anemia?
A. Antigen conflict
B. Rhesus conflict
C. Conflict over antigen B
D. Conflict over antigen AB
E. Intrauterine infection

3. The firstborn has a Rhesus - negative blood type, no isoantibodies were detected. The man is Rh-positive. Antibodies were not detected during monthly monitoring. What should be the doctor's tactics?
A. Carry out immunization after delivery within 72 hours.
B. Do not carry out desensitization and immunization.
C. Immunize a pregnant woman at 28 weeks of pregnancy and within 72 hours after delivery.
D. Carry out desensitizing therapy, do not carry out immunization.
E. Administer desensitizing therapy and immunization within 72 hours of delivery.
Відповіді 1 - A, 2- B, 3 - C.

2. Questions (test tasks, problems, clinical situations) to check basic knowledge on the subject of the lesson.

Question:

1. Endoscopy in obstetrics.

2. Use of endoscopic technologies in feto-fetal transfusion syndrome, immunoconflict, ZVUR, fetal malformations.
3. Fetoscopy, chorion biopsy, amniocentesis, placentacentesis, cordocentesis and fetal skin biopsy.
4. Pregnancy and ovarian tumors.
5. Indications and features of the operative laparoscopy technique during surgery.

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 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 draw up a management plan for a gynecological patient.
Subgroup III – evaluates the correctness of the answer of subgroups I and II and makes its corrections.

Clinical tasks:

1. Repeat pregnant (34-35 weeks), suffering from hypertension II B century. for 10 years. From the 24th week of pregnancy, an increase in blood pressure to 150/90 mmHg was noted, swelling of the II degree appeared, protein in the urine up to 2 g/day. During examination, the fetus lags behind in gestational development by up to 4 weeks, despite intensive treatment.

Diagnosis? What diagnostic methods should be used to assess the state of the fetus?

Answer: ZVUR fetus of the 3rd century. Tonographic biometry of the fetus, evaluation of the biophysical profile of the fetus, determination of estradiol in the mother's body and in the amniotic fluid, cardiomonitoring in dynamics and dopplerometry of the main indicators of uterine-placental-fetal blood flow should be used.

2. In a woman in labor with anemia and hypertension of the 1st stage, when the cervix was fully opened after the discharge of amniotic fluid, the head descended into the pelvic cavity and immediately upon listening to the fetal heartbeat, bradycardia up to 100 beats/min appeared.

Diagnosis? What factors contributed to the development of this pathology?

Answer: Acute fetal distress. Possible loss of umbilical cord loops.

3. The child suffered acute distress during childbirth, which developed in the II period of childbirth, and his condition after delivery was assessed at 2 points on the Apgar scale (heart rate - 2 points, breathing - 0 points).

What preventive measures should have been taken in this case?

Answer: It was necessary to apply the output obstetric forceps to shorten the II period and speed up the birth of the child.

4. Pregnant, gestational age 38 weeks, history of primary hypothyroidism and placental dysfunction. An ultrasound examination of the placenta revealed III degree of maturity. During dopplerometry of the vessels of the umbilical cord - an increase in vascular resistance in the umbilical artery of the fetus. Diagnosis? Tactics for managing pregnancy and childbirth?

What possible disorders in a newborn should be expected first of all after delivery?

Answer: Placental insufficiency. Fetal distress. It is necessary to hospitalize a pregnant woman to a hospital for the division of pathology of pregnant women, prescribe a complex clinical and laboratory examination and therapy aimed at improving uterine-placental-fetal blood flow (Actovegin, Solcoseryl, Essentiale, vitamin E, methionine), conduct a cardiomonitor and examine the fetus in dynamics. Childbirth should be conducted conservatively, taking into account the obstetric situation, and constant CTG monitoring of the fetal condition should be carried out. Be ready to carry out resuscitation of the newborn, as in this case the respiratory distress syndrome of the newborn may occur.

5. She is 30 weeks pregnant, has a history of vomiting during pregnancy. Complains of loss of appetite, lethargy, headache. On examination, the skin and mucous membranes are pale. In the general blood analysis, hemoglobin is 88 g/l, erythrocytes are 2.95 *1012/l.

What serious condition should be warned in this case? The doctor's tactics?

Answer: The development of chronic placental insufficiency, taking into account the hemic genesis of the development of hypoxia. It is necessary to hospitalize the pregnant woman to the department of pathology of pregnant women, conduct a comprehensive clinical and laboratory examination and prescribe anti-anemic therapy and therapy aimed at preventing the development of placental insufficiency.

Test tasks:

1. A 32-year-old patient complains about the absence of pregnancy during 5 years of married life. Basal temperature is biphasic. The man was examined and is healthy. During metrosalpingography, the fallopian tubes are filled with contrast to the ampullary department, there is no contrast in the abdominal cavity. Which of the following is the most appropriate to prescribe for the treatment of this patient?

A. Laparoscopic fallopian tube plastic surgery
B. Hydro tubing courses
C. Stimulation of ovulation
D. In vitro fertilization
E. Insemination with donor sperm

2. During a visit to a gynecologist, a 30-year-old woman with a 5-year history of infertility was found to have an endometrioid cyst of the left ovary 5 cm in diameter, according to clinical examination and pelvic ultrasound. Operative treatment is offered. Determine the expected volume of the operation.

A. Laparotomy. Extraction of the cyst capsule.
B. Laparotomy. Adnexectomy.
S. Laparoscopy. Adnexectomy.
D. Laparoscopy. Enucleation of the ovarian cyst capsule.
E. Laparoscopy. Tubectomy.

Correct answers: 1 – A, 2 – D.

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

Laparoscopy is one of the methods of modern surgery, in which (without a large dissection of the abdominal wall), with the help of special optical devices (which are introduced into the abdominal cavity through small incisions in the skin), an examination of the organs of the abdominal cavity is performed.
Laparoscopy also belongs to modern methods and is used in the diagnosis of obstetric pathology.

Feto-fetal transfusion syndrome

Clinical manifestations	**Variants of combinations of clinical manifestations, on the basis of which the doctor makes a conclusion about the suspicion of SFFT**					
	1	2	3	4	5	6
Confirmed monochorionic twin Before assuming the presence of SFT, you should make sure that the twin is really monochorionic, because SFT is inherent only to monochorionic twins. Monochorionic twin - chorionicity confirmed within 10-13 weeks (T-sign, two layers in the interfetal membrane, the thickness of the interfetal membrane <2 mm)	yes	yes	ID *	ID	ID	ID
MVC disproportion - a ratio of 1:2 or more, but does not reach the limit values (≤2 cm and ≥8 cm)	yes		yes		ID	ID
One of the MICs reaches one of the threshold values, and the other does not		yes		yes	ID	ID
Unisexual fetuses In the case when chorionicity cannot be clearly determined, the presence of unisexual fetuses is a necessary condition for the diagnosis of SFFT			yes	yes	yes	ID
Discordant fetal growth (a difference of 20% or more) and the inter-amniotic membrane is not visualized					yes	
Discordant fetal growth with a tendency to polyhydramnios in larger fetuses and oligohydramnios in smaller fetuses						yes

* ID - impossible to determine

Classification of SFFT by stages (Quintero)

Stage	Signs
I	• Ascites in one fetus (IMC ≤2 cm) AND polyhydramnios in the second (IMC ≥8 cm) • The donor's bladder is visualized • Indicators of umbilical blood flow are normal
II	• • Ascites in one fetus (IMC ≤2 cm) AND polyhydramnios in the second (IMC ≥8 cm) • • The donor bladder is NOT visualized • • Blood flow is slowed, but not terminal
III	• Ascites in one fetus (IMC ≤2 cm) AND polyhydramnios in the second (IMC ≥8 cm) • • The donor bladder is NOT visualized • • Blood flow in the vessels of the umbilical cord is terminal in any fetus. The presence of at least one of the following: • o Absent or reversible diastolic blood flow in the umbilical cord artery • o Reversible blood flow in the ductus venosus or pulsatile in the umbilical vein
IV	• All of the above, plus ascites or fluid accumulation in two or more cavities (hydropericardium, hydrothorax) in any of the fetuses (more often in the recipient)
V	• Death of one or both fetus

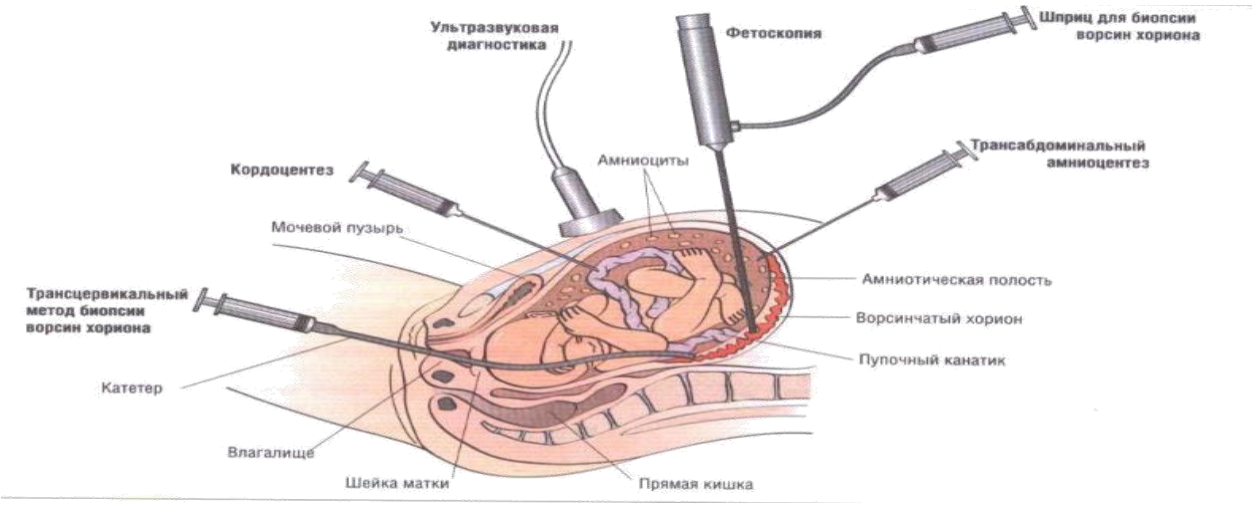
For practical use, the following form is more convenient:

Classification of SFFT by degree of severity

Degree of severity	Stage	Shallow water and high water	1. The donor's bladder is not visualized	3. Terminal blood flow	2. Edema	Death of one or both fetus
Light	I	+	-	-	-	-
Middle	II	+	+	-	-	-
	III	+	+	+	-	-
Heavy	IV	+	+	+	+	-
	V	±	±	±	±	+

At the end of this stage, the doctor determines the degree of severity and the stage of SFFT. **Example of a diagnosis:** "Multiple pregnancy. Twin. Monochorionic

diamniotic. SFFT of heavy foot (V stage according to Quintero). Intrauterine death of one of the fetuses.



Invasive diagnostic methods (IMD) are a collective group of studies that allow obtaining biological material of fetal origin for analysis (amniotic fluid, villi of the chorion or placenta, areas of the skin and blood of the fetus).

• **Chorionobiopsy -** obtaining cells that form the placenta (pregnancy period 10-14 weeks);

• **Placentobiopsy (placentocentesis) -** obtaining placenta cells (pregnancy period 14-20 weeks);

• **Amniocentesis -** puncture of the amniotic sac with the withdrawal of a small amount of amniotic fluid (pregnancy period 15-18 weeks);

• **early (13-14 weeks);**

• **ordinary (15-22 weeks);**

• **Fetoscopy -** insertion of a probe and examination of the fetus (performed on the 18th-19th week of pregnancy)

• **Cordocentesis -** taking blood from the umbilical cord of the fetus (from the 20th week of pregnancy);

• **in isolated cases, a biopsy of the fetal tissue is performed.**

3.3. Requirements for work results, including to registration

1. Examine a pregnant woman.
2. To appoint an examination of a pregnant woman for one or another obstetric pathology.
3. Evaluate the data of the clinical, laboratory and instrumental examination of a pregnant woman.

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

Test tasks KROK-2

1. (2020) What complications of the first trimester of pregnancy do not lead to the development of placental dysfunction?

A. Low implantation of the fertilized egg
B. The size of the fetus slightly exceeds the gestation period*
C. Lagging of the size of the fetus from the term of pregnancy
D. Detachment of the chorion
2. (2019) What diagnostic methods are not used to detect fetal growth retardation?
A. Measurement of the standing height of the uterine fundus
B. Ultrasound examination
C. Colposcopy*
D. Measurement of the circumference of the fetal abdomen
3. (2018) What biometric indicators do not indicate the presence of ZVUR of the fetus?
A. The height of the uterine fundus corresponds to the term of pregnancy*
B. Lagging of the standing height of the uterine fundus by 2 cm according to the term
C. Absence of increase in the standing height of the uterine fundus after 2-3 weeks
D. The lag in the standing height of the uterine fundus is more than 2 cm according to the term

Practical lesson №8

Topic Colposcopy in the diagnosis of cervical pathology.

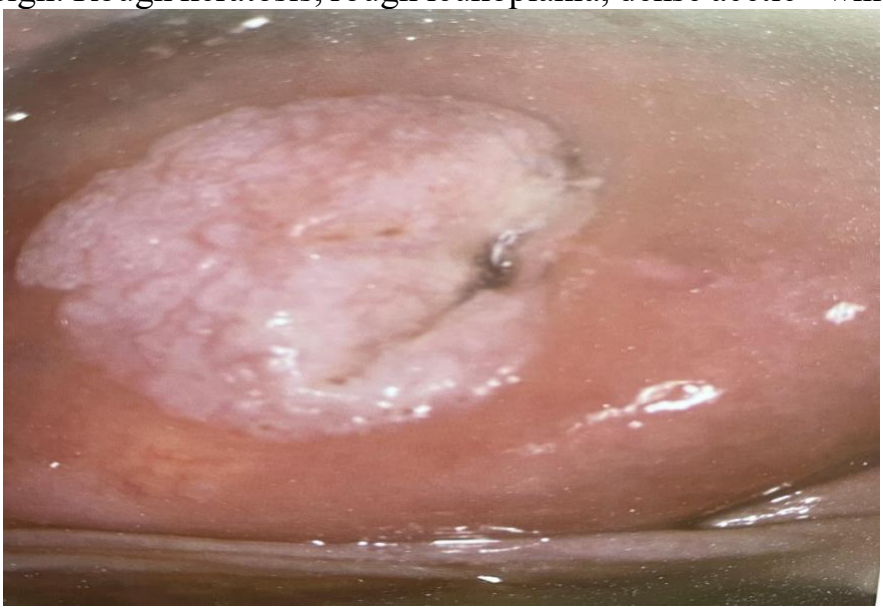
Aim: Familiarization with the capabilities of modern endoscopic equipment (colposcope) in the diagnosis of diseases of the female genital organs (vulva , vaginal walls and cervix). Mastering the basic technique of colposcopy (simple and common). Determination of indications and contraindications for colposcopy. Learn how to assess the patient's condition by asking for help **,** draw up an examination plan using modern diagnostic methods, analyze data from laboratory and instrumental examination methods for precancerous and malignant diseases of the female reproductive system, and determine a preliminary diagnosis:
Basic concepts: Precancerous diseases of the cervix: classification. Simple and advanced colposcopy. Conducting principles. Colposcopy during pregnancy. Features of the condition of the cervix during pregnancy. Differential colposcopic diagnosis: cervical deciduosis, cervical cancer.

Plan:
1. Support control knowledge (written work, written testing , online, frontal testing poll etc.).
Requirements for theoretical readiness students to perform practical classes.
Knowledge requirements:
- skills communication and clinical examination the patient;
- ability determine list necessary clinical and laboratory and instrumental research and evaluate their the results ability determine list necessary clinical and laboratory and instrumental research and evaluate their results;
- ability establish preliminary and clinical diagnosis disease**;**
- ability perform medical manipulations;
- ability conduct consulting on issues precancerous diseases of female genital organs
- the ability to conduct medical documentation.

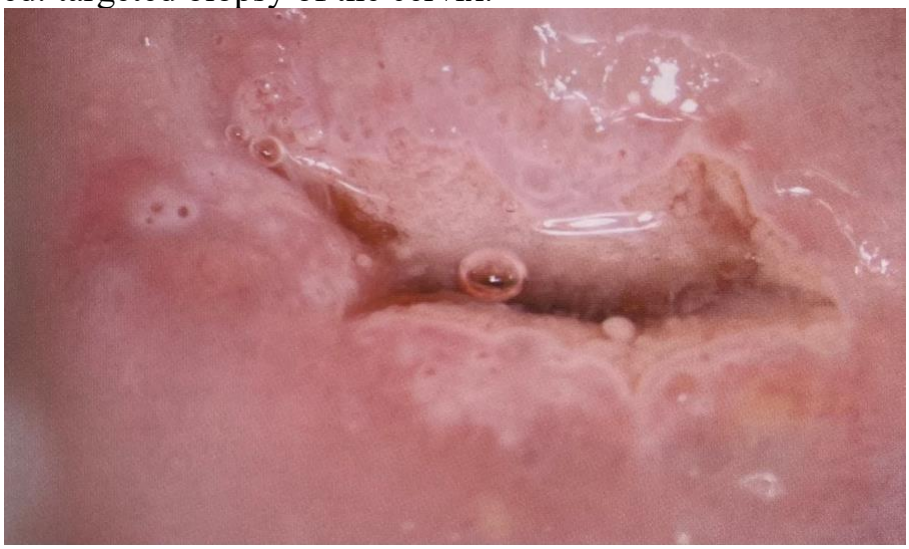
List didactic units:
- consulting on issues pro -cancer diseases of the cervix, external genital organs,
- general review m methods examination using gynecological examination: in mirrors, bimanual examination, rectovaginal examination
- Condition assessment mucous membrane of the patient 's cervix .
- necessary examination, which is carried out in a planned manner before acceptance decision of using additional method of examination and treatment

Typical situational tasks:

1. The patient is 45 years old has complaints of discharge from the vagina of a watery nature and contact bloody. Last cancer examination 5 years ago, revealed erosion cervix, treated fat tampons. In the mirrors: the cervix is hypertrophied, the cervix is marked on both lips growth, which bleed when touched. Vaginal: the body of the uterus is somewhat increased, mobile, painles, appendages are not determined. Vault vagina, parameters - free. Which of the methods is the most valuable for confirmation diagnosis?
D-z: Colposcopy with targeted biopsy. Smear for cytomorphological examination. Targeted biopsy of the cervix.
2. Clinical case No. 1
A test with a 5% solution of acetic acid was performed for 30-40 seconds Adequate colposcopic picture. The joint line is visualized completely in the cervical canal. Type 2 transformation zone. Localization of the lesion within the transformation zone in 4 quadrants, 50% of the cervix. Anomalous colposcopic picture of the II degree and a non-specific sign: Rough keratosis, rough leukoplakia, dense acetic - white epithelium.



Colposcopic picture corresponds to: Dysplasia epithelium of the cervix, severe intraepithelial carcinoma (HSIL , CIN 3), leukoplakia
Recommended: targeted biopsy of the cervix.



Adequate colposcopic picture. The joint line is visualized completely at the level of the outer eye. Type 1 transformation zone. A normal colposcopic picture of the cervix , covered with BPE, is visualized circularly metaplasia , single islanders cylindrical epithelium.
colposcopic picture tells: Variant of the norm.

2. Typical tests

1. A 22-year-old girl came to the doctor for a routine examination. She smokes 1 pack of cigarettes a day for 5 years. Has one permanent sexual partner, uses condoms. My paternal grandfather died of a heart attack at the age of 60. During the physical examination, the pulse is 78/min., the respiratory rate is 14/min., the blood pressure is 110/70 mm Hg. During auscultation of the heart, a systolic murmur is heard in the II intercostal space to the left of the sternum. Which doctor's recommendation would be most appropriate for this patient?

A. Colposcopy with biopsy
B. Pass a Pap test
C. Screening for hyperlipidemia
D. Pass a Pap test and take an HPV test
E. Learn to self-examine the mammary glands

2. In a 30-year-old patient, at the regular preventive examination at the gynecologist, the vaginal part of the cervix was found to have fine points formation in the form of "eyes" of dark bluish color. Doctor assumes endometriosis vaginal parts of the cervix. What is the research method will be the most informative for confirmation diagnosis?

A. Colposcopy , targeted biopsy of the cervix
B. Hormonal examination
S. Ultrasound of the pelvic organs
D. Scraping of the mucous walls of the uterine cavity
E. Hysteroscopy

2.Questions (test tasks, tasks, clinical situations) for verification basic knowledge on the subject of the lesson.

Questions:

- Classification of precancerous cervical diseases
- Etiopathogenetic factors that determine development pathology cervix Papillomavirus infection
- Precancerous diseases of the cervix: etiology, clinic, diagnosis, treatment
- Methods diagnostics precancerous diseases cervix - Colposcopy. Schiller's test.
- Treatment tactics for precancerous lesions diseases cervix, indications for radical methods treatment _
- Vaccination against HPV infection

3. Formation professional ability, skills (mastery skills, conducting curation, definition schemes treatment, laboratory research, etc.).

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

Interactive tasks:

- students groups divide into 3 subgroups of 4-5 people each. We work in the office of pathology of the cervix, we consult with patients colpophotogramiz archive, we give tasks:
- And the subgroup - put previous diagnosis, during colposcopy
- second subgroup is to draw up a management plan gynecological patient after colposcopy.
- III subgroup - evaluates correctness answers of subgroups I and II and adds his own corrections.

Atypical situational tasks:

1. A 35-year-old patient went to the gynecological office hospital with complaints about periodicals lower back pain departments of the abdomen, which are increasing during menstruation, dark brown smearing selection with sexual ways. With bimanual examination: the body of the uterus is several increased, appendages are not determined, during examination cervix in mirrors discovered blue eyes.

1) Which one diagnosis most likely?
External cervical endometriosis

2) Examination algorithm: examination of the cervix in mirrors, smears for microscopy and cytomorphology, colposcopy is common. Biopsy of the cervix.

Atypical tests:

1. To which histological classification does simple leukoplakia of the cervix belong
A. Precancerous diseases
B. F new disease
C. Cervical cancer
D. Adenomatosis
E. Adenomyosis

2. Select true treatment tactics for benign and polypoid formations cervix
A. Polypectomy,
B. R is separate diagnostic scraping
C. Observation
D. Colposcopy, cytology, bacterioscopy
E. Local therapy, and antibacterial therapy
F. Endometrial scraping

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

• To learn how to collect an anamnesis correctly, to pay attention to the patient's complaints, which make it possible to make a preliminary diagnosis, to plan further tactics in different periods of a woman's life, from the juvenile to the postmenopausal period. The examination is carried out in a planned or urgent manner before acceptance decision in favor of whether another method of examination and treatment of the patient.

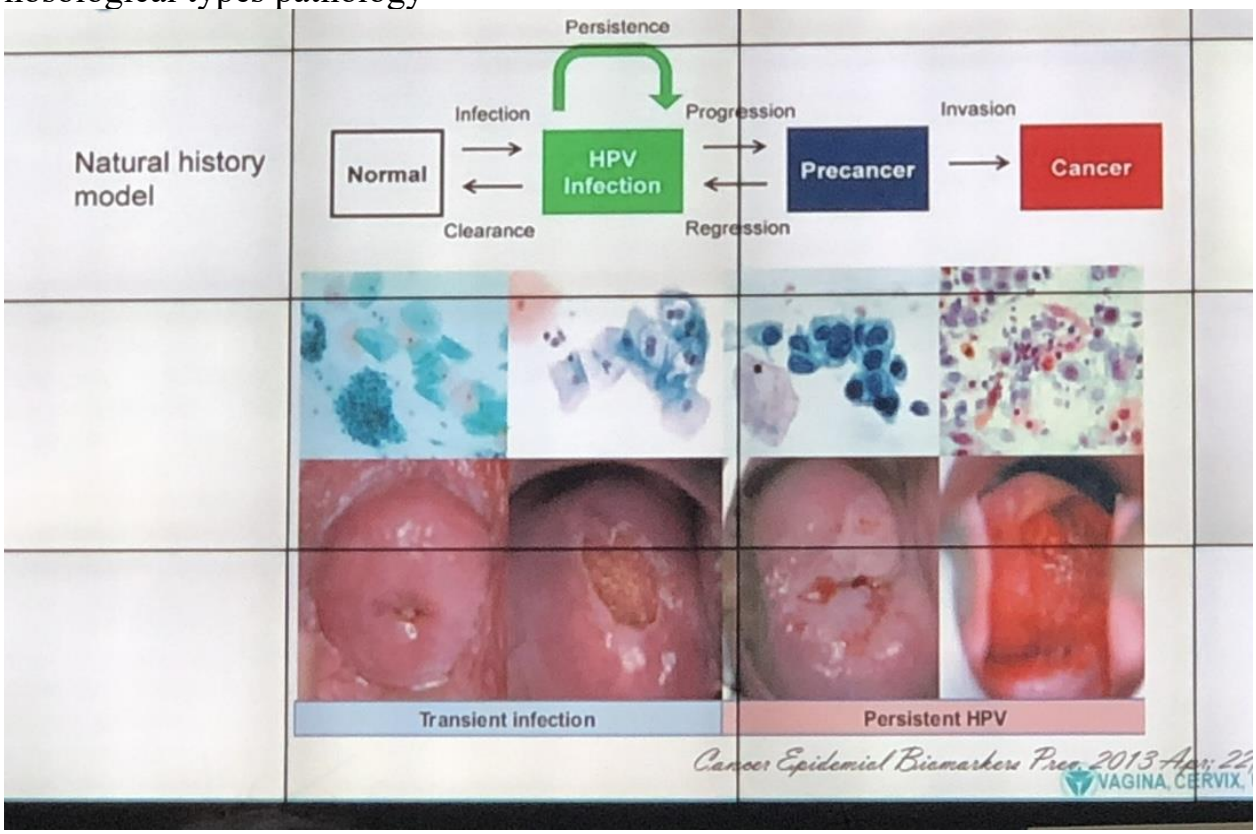
• Master the ability to correctly draw up an examination plan, taking into account the invasiveness of the methods, the need for these studies. To carry out modern research methods that allow you to identify and take into account all the smallest details that contribute to the recognition of the disease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

Diseases of the genital organs are divided into neoplastic (tumor) and non- neoplastic (background or pre-tumor). Non-neoplastic lesions of the external genitalia are also called dystrophy of the vulva.

Precancerous diseases Precancerous diseases of the cervix	Dysplasia of the cervical epithelium - focal or single or multiple pathological processes in which hyperplasia, proliferation, violation of differentiation, maturation and rejection of epithelial cells that do not go beyond the basement membrane are noted.
Ectopia of the cervix	displacement of the cylindrical epithelium on the displacement of the cylindrical epithelium on the vaginal portion of the cervix.
Polyp of the cervical canal	this is a focal proliferation of the connective tissue of the endocervix, covered with cylindrical epithelium and protruding into the lumen of the cervical canal or beyond it and are connective tissue growths covered with epithelium. Cervical papilloma is a form of cervical lesion and including rites epithelium
Papilloma neck	the form of the lesion of the cervix and is characterized by focal growths of the stroma and multilayered epithelium with keratinization. Viral infections and chlamydia play a certain role in their occurrence
Candyloma of the cervix	abnormal growths of multi- layered flat epithelium according to the type of acanthosis (immersion of keratinized epithelial islands in the underlying tissue between the connective tissue papillae) with elongated papillae.
Dysplasia epithelium of the cervix (cervical intraepithelial neoplasia, CIN, cervical intraepithelial neoplasia, CIN	characterized by pronounced proliferation of atypical epithelium of the cervix with a violation of its stratification without involvement of the stroma and surface epithelium in the process, a pathological process of keratinization of the surface layers of a multilayered fold

Leukoplakia	Leukoplakia development is based on histological changes: hyperkeratosis, parakeratosis, acanthosis. who the epithelium of the cervix
Dysplasia vulva (vulvar intraepithelial neoplasia, vulvar intraepithelial neoplasia, VIN	characterized by violation maturation and normal keratinization cells without invasion into the stroma

Conduct gynecological examination (in mirrors, bimanual, rectal, rectovaginal).
Collect special gynecological history, evaluate results of laboratory examination
Conduct pick up material from the vagina, cervix, cervical canal and urethra for cytological and bacterioscopic research.
Evaluate the results cytological, histological, virological and bacteriological of research/
Evaluate results of ultrasound examination pelvic ·organs.
Evaluate the colposcopic protocol research cervix and vulva
Make an examination plan the patient with different background and precancerous nosological types pathology



Precancerous diseases of the cervix

The group of precancerous conditions includes focal single or multiple proliferations with the phenomena of cell atypia

1. Dysplasia,
2. Leukoplakia with atypia of cellular elements,
3. Adenomatosis
4. Cervical polyp

Classification precancerous became cervix

Dysplasia epithelium of cervix (**cervical** intraepithelial neoplasia, CIN, cervical intraepithelial neoplasia, CIN) is characterized pronounced proliferation atypical epithelium cervix with a violation him layers without involvement in the process stroma and process keratinization superficial layers multilayered flat epithelium cervix
Cervical intraepithelial neoplasia - (CIN) is distributed:
CIN I weak, CIN II moderate, CIN III severe
According to the BETESDA classification (TBS):

Precancerous changes

CIN 1+PVI (koilocytosis, atypia, flat condyloma) = LSIL	LSIL - squamous cell low- grade intraepithelial lesions
CIN II - III cr.in situ = H-SIL	H-SIL - squamous cells high- grade intraepithelial lesions

Normal differentiation and stratification is disturbed due to hyperplasia of basal and parabasal cells without further differentiation. Consequently, cellular and tissue atypia appears.

Risk factors for the development of cervical dysplasia:

• Early onset of sexual life (14-17 years old), when the epithelium of the cervix is immature and easily exposed to oncogenic influences.
• Frequent change sexual partners.
• Abortions and childbirth at a young age (traumatization cervix). • Diseases which _ are transmitted sexually (papillomavirus VPH type 16-18, trichomoniasis, chlamydia, ureaplasmosis, gonorrhea, etc.).
• Smoking.

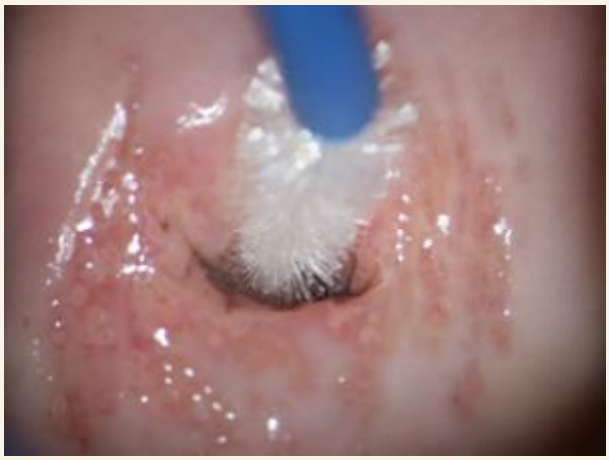
Deciduous cervix of a pregnant woman. Physiological changes occur during pregnancy, resulting in changes in cytological, histological and colposcopic pictures. Such changes caused by pregnancy can be the cause of diagnostic errors. Increased vascularization of the stroma leads to blueness of the cervix. In the II trimester of pregnancy, more than 90% of patients. Vascularization is well visualized during colposcopy, sometimes colposcopically resembling the pathology of a high-grade abnormality. There is hyperplasia and hypertrophy of the papillae of the mucous cervical canal and an increase in the secretory activity of the cylindrical epithelium with the formation of thick mucus. In the endocervix, folding increases, new crypts appear.

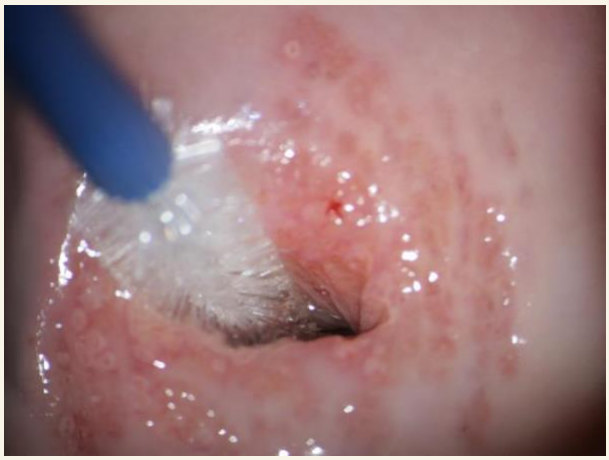
The purpose of colposcopy in a pregnant woman is to rule out the presence of invasive cancer, to determine the need for targeted biopsy, since cervical cancer during pregnancy poses a threat to the health of the mother and child.

IV. Summing up (criteria for evaluating learning outcomes).
Diagnostic methods:
1. Review in mirrors:
2. Cytomorphological smear investigation
- classic (exocervix and endocervix)

- based on liquid cytomorphology.

This is a painless procedure. The doctor removes the cervix in mirrors, then uses a soft brush to make circular tangential movements along the epithelium of the cervical transformation zone.





The process of taking a cytological smear. Zone of transformation of the cervix 1st type. The junction line of multilayered flat and cylindrical epithelium is visualized completely.

After that, the resulting cell material is transferred from the brush to glass or into a container with a special solution and sent to the laboratory. In the laboratory, after preparing and staining the drug, the cytologist examines the structure of the cells and gives a conclusion — whether the smear is normal or pathological.

Bethesda 2001 class	**Interpretation**	**Correspondence to the type of smear**	**Tactics**
Negative for intraepithelial lesions and neoplasia (NILM)	The normal condition of the squamous epithelium corresponding to the age and condition of the woman (pregnancy, post-partum state, menopause, puberty, taking hormonal drugs, intrauterine spiral) without visible epithelial changes suspicious for dysplastic. This category also includes inflammatory and reactive changes in the squamous epithelium caused by bacterial, fungal or viral (herpes simplex virus) agents. This category also includes the shift of	I or II	A routine gynecological screening program is recommended, with a repeat Pap smear every 1 year for women under 30 years of age and 2 years for women over 30 years of age.

	bacterial flora towards vaginosis.		
Atypical squamous cells with unspecified features (ACS – US)	Changes in the squamous epithelium that cannot be related to the inflammatory process or the action of any of the factors described above, but do not fully correspond to the picture of the dysplastic process. This category belongs to reversible changes, probably associated with HPV infection.	II - III a	Follow-up with a repeat Pap test after 6 months is recommended. A capsid test for predicting regression of dysplasia.
Low-grade squamous intraepithelial lesions (LSIL)	Changes in the squamous epithelium with signs of mild dysplasia. This category belongs to the reverse changes caused by HPV infection.	IIIa	Follow-up with a repeat Pap test after 6 months is recommended. A capsid test for predicting regression of dysplasia
Atypical squamous cells, HSIL cannot be ruled out, (ACC – H)	Changes in the squamous epithelium with indeterminate, when severe dysplasia cannot be excluded. This category belongs to non-reversible changes caused by HPV infection and requires radical treatment tactics.	III	Follow-up with a repeat Pap test after 6 months is recommended. A capsid test for predicting regression of dysplasia.

High-grade squamous intraepithelial lesions (HSIL)	Changes in the squamous epithelium of a severe degree of damage. This category includes severe dysplasia, as well as carcinoma in situ. These are irreversible conditions that require surgical intervention, the volume of which is determined on the basis of a histological conclusion.	III-IV	Colposcopy with the selection of biopsies of dysplastic areas of the cervix for further histological analysis with the determination of the prevalence of dysplasia, control of the presence/absence of invasion and the extent of surgical treatment is recommended.

Examination of the cervix with abnormal cellular morphology of the Papanicolaou smear includes the following methods:

• simple and extended colposcopy ;
• targeted biopsy of the cervix;
• scraping of the mucous membrane of the cervical canal (endocervical curettage);
• targeted and widespread cone -shaped biopsy of the cervix

simple colposcope and I — examination of the cervix p and sl i you are far from being separated from surfaces and without the use of honey and stone products .

The river is wide the colposcope and I are carried out afterwards I will apply on the vaginal part of the cervix 3% solution vinegar acids (acetic acid coagulates protein and abnormal cells, which contain more protein, look acetic -white), and after 2% solution Lugol After treatment with 3% solution vinegar acids and unchanged epitelium changes to bl i du coloring, when applying no 2% solution Lugol (**Shiller** 's test) surface pubic parts on the cervix is different painted in dark brown and black. Normally iodine-positive, if not stained iodine-negative.

Target biopsy : Taking material from a pathological area of the surface of the cervix is carried out using a conchotome, under colposcopic control research.

Methods treatment diseases cervix

1. Conservative - a course of anti-inflammatory therapy.
2. Surgical: • local destruction (argon plasma coagulation, diathermocoagulation, cryodestruction , laser destruction);
• radical surgical intervention (excision of pathological areas of the cervix, amputation of the cervix, trachelectomy , hysterectomy).
3. Combined

Primary prevention of RSHM consists in carrying out measures against persons who do not have signs disease, for the purpose of prevention him development in the future.

Primary prevention of RSM is vaccination teenage girls before puberty life _ Vaccines: Cervarix (2 x valent), Gardaxil (4-9 valent).

Secondary prevention of RSHM consists in the early detection and treatment of women who have precancerous changes on the cervix in order to prevent, in the future, the development of invasive cancer.

Tertiary prevention of RSM is complex or combined treatment, which includes surgical intervention in combination with radiation and chemotherapy.

Execution algorithm practical skills

Review cervix in mirrors, sampling material for cytomorphological research.

1) greet the patient;
2) identify patient (name, age);
3) inform the patient about the need carrying out research;
4) explain to the patient, how the research is conducted;
5) get permission to carry out research;
6) wash hands;
7) wear inspection gloves;
8) take gynecological a mirror in the dominant hand;
9) fingers second hand carefully to breed labia, slowly enter closed mirror in the vagina without touching urethra and clitoris;
10) gynecological mirror unfold in the vagina and open for inspection cervix;
11) assess the condition of the vagina parts cervix and walls vagina:

- color and condition of the mucous membrane shells vagina (hyperemia, swelling)
- the nature of the vagina secretions (physiological, pathological)
- the shape of the cervix (conical, cylindrical)
- length vaginal parts cervix (cm)
- external form eye cervical canal (round, slit-like, availability gaps)
- nature of secretions from the cervical canal (mucous, bloody, purulent, watery)
- to take substantive glass that Ш (exocervix) and Ц (endocervix) are marked;
- carry out a collection material for cytomorphological research:

Air spatula (or with a cytobrush bent at 90°) scrape from surface cervix by conducting complete rotation (360°), apply the material to the object glass with a broad stroke, thin and uniform stroke under marked Ш (exocervix); insert the cytobrush into the cervical canal, rotate its 360° 2-3 times,collected material rotational movements around own axes apply to substantive glass under with the mark T (endocervix); carefully remove mirror;inform the patient about the results research; to thank the patient; remove inspection gloves; wash your hands.

3.3. Requirements for work results, including to registration

- Counsel women on issues of pathological secretions during sexual intercourse
- Assess the patient.
- treatment method for teenagers, for women of reproductive age, for Oral report about the thematic patient.
- Analysis and discussion of the results of the patient's examination.
- Multimedia presentation on the topic of the class (literature review using modern sources; video films, etc.).

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

Professional control skill
Situational task:
The patient is 48 years old puts forward complaints about contacts bleeding _ When looking in mirrors discovered hypertrophy cervix/ The last has appearance " flowery cabbage ", easily injured, dense. With bimanual reviews: vault shortened, the body of the uterus is immobile. Which reliable diagnosis?
1. Examination plan. (Examination in mirrors, colposcopy , targeted biopsy, cone biopsy, FDV of the uterine lining.)
2. Clinical diagnosis (D-z : Cervical cancer)
3. Treatment measures.

Tests:
The patient is 45 years old complains about contacts bleeding during the last 5 months. When examined in mirrors: the cervix is hypertrophied, has appearance floral cabbage, bleeds when touched with a probe. Bimanual research: neck dense consistency. The body of the uterus is not enlarged, it is mobile. The appendages are not palpable. parameters are free Vault deep. Which most likely diagnosis?
A. * Cervical cancer
B. Cancer of the body of the uterus
C. Fibromatous node that is born
D. Cervical pregnancy
E. Polyposis cervix

4. Summing up (criteria for evaluating learning outcomes).
Current control: oral survey, testing, assessment of performance of practical skills, solution of situational clinical tasks, assessment of activity in class, etc.
The structure of the current evaluation in the practical lesson:
1. Assessment theoretical knowledge on the topic of the lesson:
- methods: survey, solution situational clinical tasks;
- the maximum score is 5, the minimum rating - 3, unsatisfactory rating - 2.
2. Rating practical skills and manipulations on the topic of the lesson:
- methods: assessment correctness implementation practical skills;
- the maximum score is 5, the minimum rating - 3, unsatisfactory rating - 2.
3. Assessment work from the patient on the subject of the lesson:
- methods: assessment: a) communicative skills communication with the patient, b) correctness assignments and evaluations laboratory and instrumental studies, c) compliance with the algorithm of conducting differential diagnosis d) rationale clinical diagnosis, e) drawing up a treatment plan;
- the maximum score is 5, the minimum rating - 3, unsatisfactory rating - 2.

Current assessment criteria for practical lesson:

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

List of recommended literature (main, additional, electronic information sources)
Basic

1. Clinical obstetrics and gynecology: teaching manual: trans. 4th English ed. / BryanA. Magova, Philip Owen, Andrew Thomson; Science editor. translation. Mykola Shcherbina. - K.: VSV "Medicine", 2021. - X, 454 p.
2. Endoscopic surgery: teaching manual/V.M. Zaporozhan, V.V. Grubnik, Yu.V. Grubnik, A.V. Malinovsky and others; edited by V.M. Zaporozhan, V.V. Grubnika -K.: VSV "Medicine", 2019. - 592 p.
3. Obstetrics and gynecology: in 4 volumes. – Volume 3. Non-operative gynecology: a textbook (University IV of the Russian Academy of Sciences) / V.M. Zaporozhan, I.B. Vovk, I.Yu. Gordienko and others; under the editorship V.M. Confused - 2014. - 928 p.
4. Obstetrics and gynecology: in 2 books. – Book 2. Gynecology: a textbook (III-IV university) / edited by V.I. Hryshchenko, M.O. Shcherbiny - 2nd ed., edition, 2017. – 376 p.
5. Medical acceptance criteria for the use of contraceptive methods: 5th edition. Guidelines. - Geneva: World Health Organization; 2015
6. 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.
7. Oats, Jeremy Fundamentals of Obstetrics and Gynecology [Text]: Liewellyn-Jones Fundamentals of Obstetrics and Gynecology / J. Oats, S. Abraham. - 10th ed. – Edinburgh [etc.]: Elsevier, 2017. – VII, 375 p.

8. 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.

Additional:

1. Gynecology: a guide for doctors./ V.K. Likhachev. – Vinnytsia: Nova Kniga, 2018. - 688 p.
2. Family planning. Educational and methodological manual / N.G. Hoyda, O.V. Hryshchenko, V.P. Kvashenko, O.V. Kravchenko et al. / Kyiv, 2016. – 444 p.
3. Infertility in marriage: education. study guide higher honey. education closing III-IV years, acre. - Kh.: Khnist National Medical University, 2014. - 126 p.

Electronic information resources:

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/