

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

Faculty of international

Department of Obstetrics and Gynecology

**I APPROVE**  
Vice-rector for scientific and pedagogical work  
  
Eduard BURIACHKIVSKYI  
September 1 2023



**METHODOLOGICAL DEVELOPMENT TO THE PRACTICAL LESSONS  
FROM MEDICAL PRACTICE**

Faculty of international , 4th year

Educational discipline " **Obstetrics and gynecology** "

**Practical lesson №. 1.** Topic: " Medical manipulations in gynecology"

**Approved:**

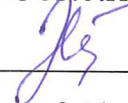
Meeting of the Department of Obstetrics and Gynecology  
Odessa National Medical University

Protocol No. 1 dated August 28, 2023 .

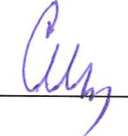
Head of the department \_\_\_\_\_  \_\_\_\_\_ ( Ihor GLADCHUK )

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## Practical lesson №1

**Topic:** " Medical manipulations in gynecology".

**Purpose:** To familiarize with the rational scheme of medical manipulations in gynecology for gynecological patients. Perform medical manipulations in the conditions of a medical institution, at home or at work based on a previous clinical diagnosis and/or indicators of the patient's condition, using knowledge about a person, his organs and systems, observing relevant ethical and legal norms, by making a reasoned decision and using standard methods.

**Basic concepts:** Manual examination and examination of women in mirrors. Taking smears for bacterioscopic, bacteriological and cytological studies. Clinical examination of mammary glands. Oncoprophylaxis and oncodiagnosis in gynecology.

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

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

To provide high-quality gynecological care at the current stage, an obstetrician-gynecologist must master the entire scope of diagnostic and therapeutic manipulations, including physical examination, laboratory and instrumental methods. Over the past 20 years, endoscopic methods have become a routine practice in global practice, and more than half of gynecological operations are performed using an endoscope .

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

Knowledge requirements :

- Ability to collect medical information about the patient and analyze clinical data.
- Ability to determine the necessary list of laboratory and instrumental studies and evaluate their results.
- The ability to determine the necessary regime of work and rest in the treatment and prevention of diseases
- Ability to perform medical manipulations.
- Ability to maintain medical documentation, including electronic forms.

List of didactic units

- Manual examination and examination of a woman in mirrors.
- Taking smears for bacterioscopic, bacteriological and cytological studies.
- Clinical examination of mammary glands.
- Oncoprophylaxis and oncodiagnosis in gynecology.

**Question :**

1. Anatomy and physiology of female genital organs.

2. Peculiarities of performing medical manipulations in gynecology in a gynecological patient.
3. Formulate deontological principles of survey and examination of a gynecological patient during medical manipulations in gynecology in gynecological patients .
4. Scheme of medical manipulations in gynecology for a gynecological patient.
5. Specific functions of the female body.
6. The structure of external and internal female genital organs.
7. General and special methods of examination of a gynecological patient.

### **Typical test tasks**

1) A 51-year-old patient complains of significant bloody discharge from the vagina for 15 days . I from the anamnesis: violation of the menstrual function during the year, the patient is suffering from increased blood flow , sleep disturbance . Ultrasound: the uterus corresponds to age norms, the appendages are unremarkable, the thickness of the endometrium 14 mm. What are the doctor's tactics?

- A. Diagnostic scraping of the walls of the uterine cavity \*
- B. Conservative treatment of bleeding
- C. Hysterectomy
- D. Supravaginal amputation of the uterus without appendages
- E. Examination for TORCH infection .

2) A 32-year-old patient turned to the doctor with complaints about the absence of pregnancy for 4 years. 5 years ago, the first pregnancy ended with an artificial abortion. According to vaginal examination and ultrasound, the diagnosis was established: endometrioid cyst of the right ovary. What is the optimal method of treatment?

- A. Operative laparoscopy \*
- B. Anti-inflammatory therapy
- C. Conservative therapy with estrogen-gestagen drugs
- D. Hormonal therapy with male sex hormones
- E. Sanatorium-resort treatment

### **Typical situations and problems**

**1. A 30-year-old patient was admitted to the gynecological department with complaints of sharp pain in the lower abdomen, temperature 38.8 ° C. In the anamnesis - sexual life outside of marriage, 2 artificial abortions. During gynecological examination: the uterus has not changed. Appendages - enlarged, painful on both sides. Discharges from the vagina are purulent, significant.**

**Determine the further algorithm of the examination.**

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

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

### **Unusual test tasks:**

1. A 24-year-old woman came to a women's consultation with complaints about a 10-week delay in menstruation. She has 2 spontaneous miscarriages in her history. During the ultrasound examination, one fertile egg was found, which corresponds to 6-7 weeks of pregnancy, the heartbeat of the fetus was not determined. What is the next tactic in this situation?

- A. Scraping of the walls of the uterine cavity\*
- B. Use of uterotonic agents
- C. Appointment of hormonal therapy
- D. Observation for 1 week followed by ultrasound control
- E. Appointment of antibacterial therapy

2. In a 36-year-old patient, during a preventive examination in mirrors, deformation of the cervix due to old postpartum tears was revealed. Colposcopic examination revealed areas of dysplasia on the posterior lip. What should be done to clarify the diagnosis?

- A. Biopsy of the cervix \*
- B. Diagnostic scraping
- C. Cystoscopy, irigoscopy
- D. Bacteriological examination of secretions
- E. Ultrasound of the pelvic organs

### **Unusual situational tasks**

1. A 46-year-old woman was brought to the gynecology department with dysfunctional uterine bleeding after a delay in menstruation for 2 weeks. What should start treatment?

**Answer :** Hysteroscopy. Endometrial curettage

2. A 34-year-old patient was admitted to the gynecology department with complaints of sharp pains in the lower abdomen on the right side, which started sharply, nausea, vomiting. Bimanual examination: the uterus is of normal size, its displacement is painful, the right ovary is somewhat enlarged, rounded, painful. The vaults of the vagina are deep, palpation on the right is painful. In the mirrors: the cervix and the mucous membrane of the vagina are unchanged. Mucous discharge from the genital tract. Which research method is the most informative?

**Answer:** Laparoscopy

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

## **The main methods of researching a gynecological patient**

### **Examination of a woman's genital tract in mirrors**

#### **Procedure steps:**

1. Take the Cuzco double-edged mirror in the dominant hand.

2. With the fingers of the other hand, carefully spread the labia, slowly insert the Cusco double-edged speculum into the vagina parallel to the genital opening, without touching the urethra and clitoris.
3. The two-bladed Cuzco speculum is unfolded in the vagina and opened for examination of the vagina and cervix.
4. Assess the condition of the walls of the vagina and the vaginal part of the cervix: the color and condition of the mucous membrane of the vagina, the nature of vaginal secretions, the shape of the cervix, the length of the vaginal part of the cervix in centimeters, the shape of the external os of the cervix, the nature of secretions from the cervical canal.
5. Carefully remove the Cuzco double-sided mirror.

### **Taking swabs for bacterioscopic examination**

#### **Procedure steps:**

1. Take a glass slide marked U / C / V.
2. Collect the material for bacterioscopic examination from the urethra with a cotton applicator or a Volkmann spoon from a depth of 1.5-2 cm by scraping and apply it to the slide in the area U.
3. Take the Cuzco double-edged mirror in the dominant hand.
4. With the fingers of the other hand, carefully spread the labia, slowly insert the closed two-bladed Kuzko speculum into the vagina parallel to the genital slit, without touching the urethra and clitoris.
5. The two-bladed Cuzco speculum is unfolded in the vagina and opened for examination of the vagina and cervix.
6. Assess the condition of the walls of the vagina and the vaginal part of the cervix: the color and condition of the mucous membrane of the vagina, the nature of vaginal secretions, the shape of the cervix, the length of the vaginal part of the cervix in centimeters, the shape of the external os of the cervix, the nature of secretions from the cervical canal.
7. Collect material for bacterioscopic examination.
8. spoon or a cytobrush into the cervical canal, take the material by scraping, apply it to the slide in area C.
9. an Air spatula, apply it to the slide in area V.
10. Carefully remove the Cuzco double-sided mirror.

### **Collection of material for bacteriological examination**

#### **Procedure steps:**

1. Take three sterile test tubes with applicators. Write the necessary data on them and mark them (urethra, cervical canal, posterior vault of the vagina).

2. Collect material for bacteriological examination from the urethra with an applicator from a depth of 1.5-2 cm. Place the applicator in a suitable sterile test tube.
3. Take the Cuzco double-edged mirror in the dominant hand.
4. With the fingers of the other hand, carefully spread the labia, slowly insert the closed two-bladed Kuzko speculum into the vagina parallel to the genital slit, without touching the urethra and clitoris.
5. The two-bladed Cuzco speculum is unfolded in the vagina and opened for examination of the vagina and cervix.
6. Assess the condition of the walls of the vagina and the vaginal part of the cervix: the color and condition of the mucous membrane of the vagina, the nature of vaginal secretions, the shape of the cervix, the length of the vaginal part of the cervix in centimeters, the shape of the external eye of the cervix, the nature of secretions from the cervical canal.
7. Collect material for bacteriological research.
8. Carefully insert the applicator into the cervical canal, place the applicator in the appropriate sterile test tube.
9. Take the material from the back vault of the vagina with an applicator, place it in a suitable sterile test tube.
10. Carefully remove the Cuzco double-sided mirror.

### **Collection of smears for cytomorphological examination**

#### **Procedure steps:**

1. Take the Cuzco double-edged mirror in the dominant hand.
2. With the fingers of the other hand, carefully spread the labia, slowly insert the closed two-bladed Kuzko speculum into the vagina parallel to the genital slit, without touching the urethra and clitoris.
3. The two-bladed Cuzco speculum is unfolded in the vagina and opened for examination of the vagina and cervix.
4. Assess the condition of the walls of the vagina and the vaginal part of the cervix: the color and condition of the mucous membrane of the vagina, the nature of vaginal secretions, the shape of the cervix, the length of the vaginal part of the cervix in centimeters, the shape of the external eye of the cervix, the nature of secretions from the cervical canal.
5. Remove excess secretions with a cotton swab.
6. Take a slide marked III (exocervix) and II (endocervix).
7. Collect material for cytomorphological examination.

8. Scrape from the surface of the cervix with an Eyre spatula (or a cytobrush bent at 90°) by making a full rotation (360°), apply the material to the slide with a broad stroke, a thin and even stroke under the mark III (exocervix) .
9. Insert the cytobrush into the cervical canal, turn it 360° 2-3 times, apply the collected material with rotational movements around its axis to the glass under the mark II (endocervix)
10. Carefully remove the Cusco mirror.

### **Bimanual examination of the pelvic organs of a woman**

#### **Procedure steps:**

1. With the first and second fingers of the left (right) hand, spread the labia, 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.
2. Carefully and slowly enter the medium finger, then indicatory finger in the vagina along the back wall to the vault and cervix, fourth and fifth bring the fingers to the palm, the thumb take to the top.
3. Determine length and width of the vagina, elasticity walls vagina, sensitivity during palpation, presence membranes, neoplasms, etc.
4. Determine length vaginal parts cervix in centimeters.
5. Determine consistency cervix (tight, soft), patency external eye cervical canal (closed, passes tip finger), evaluate pain excursions cervix
6. Palm second hand carefully put on the stomach (above the symphysis) and moderately press to determine the bottom of the uterine body.
7. Take out the body of the uterus between with two hands and determine: the relative position of the uterus cervix ( anteflexio , retroflexio ), dimensions uterine bodies (normal, reduced, enlarged), consistency uterine bodies (tight-elastic, soft , compacted ), mobility uterine body (relatively mobile, limited moving), sensitivity during palpation (painful, painless).
8. Place the fingers in the bottom of the right lateral vault and, using both hands, palpate the right vaginal vault and the right appendages of the uterus, determine their size, mobility and painfulness.
9. 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.
10. Determine the capacity of the vaginal vaults.



## **Clinical examination of mammary glands**

### **Procedure steps:**

1. Examine the mammary glands, evaluate their shape, skin color, nipples, areas around the nipple (asymmetry, indentation, etc.).
2. Ask the patient put your hands behind your head in a standing position.
3. Carry out sequentially palpation right and left dairy glands, using the pads of the indicative, middle and nominative fingers of the "dominant" hand. Support with the other hand dairy gland First, conduct a superficial, then deep palpation dairy glands
4. During palpation examine mammary tissue glands clockwise arrow or by quadrants and determine her density, homogeneity, sensitivity, presence/absence voluminous neoplasms
5. When detected neoplasm to determine its shape, dimensions, consistency, boundaries formation, mobility, soreness.
6. Carry out palpation lymph nodes in the supraclavicular, subclavian and axillary areas
7. Determine availability pathological secretions from milk glands by careful compression edges areolas between index and thumb, make an estimate secretions (absent, serous, with impurities blood, dairy products, milk, etc.).

### **Colposcopy: simple and advanced**

The colposcope is installed at a distance of 10-15 cm from the entrance to the vagina. With the help of a gynecological mirror, access to the cervix is opened, and with the help of a tampon, serous discharge is removed. The doctor analyzes the color, condition of the cervix and vagina, as well as the vascular network.

#### *Extended colposcopy.*

Lugol's solutions and 3% acetic acid are used for extended research. Schiller's test allows you to accurately visualize healthy tissue (it turns brown).

biopsy material taken from these areas is sent for histological examination.

### **Fractional diagnostic scraping of the mucous cavity of the uterus**

The operation is performed under general (intravenous anesthesia) or local (paracervical novocaine anesthesia) anesthesia under strict aseptic conditions. The cervix is exposed with mirrors, treated with a disinfectant, the front lip is grasped with ball forceps, pulled back a little (with anteflexio uteri ) or to the symphysis (with retroflexio uterus ). The uterus is probed to determine its length. Then Hegar dilators are introduced into the cervical canal, each of which is 0.5 mm wider than the previous one. Extensions are carried out to No. 12. After dilatation, curette No. 2, No. 4, No. 6 are successively inserted , making sure that its curve coincides with the curve of the

uterus. A curette is inserted into the cervical canal and its walls are scraped, collecting the scraping in a separate jar with a 10% formalin solution. The end of the cu is brought to the bottom of the uterus, and then with movements from the bottom to the neck, the mucous membrane is gradually scraped from all the walls of the uterus. The obtained material is filled with 10% formalin solution and sent for histological examination.

### **Hysteroscopy (stages)**

1. Treatment of the operating field.
2. Exposure of the cervix in mirrors.
3. Fixation of the cervix by the front lip.
4. Treatment of the cervix and vagina with an antiseptic solution.
5. Probing of the uterine cavity.
6. Dilatation of the cervical canal with Hegar dilators up to No. 9.
7. Insertion of the hysteroscope tube into the uterine cavity and its examination.
8. If necessary, manipulation in the uterine cavity.
9. Biopsy. Output of the tool.

Examination of the uterine cavity should be complete. After inserting the hysteroscope tube into the uterine cavity, a panoramic hysteroscopy is first performed. At the same time, the tube of the instrument is located behind the inner eye of the cervical canal so that the field of vision covers the entire uterine cavity. It is necessary to determine its shape, dimensions, 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. The tube of the hysteroscope is brought closer to the center of the bottom of the uterus. At the same time, the main landmarks are the eye of the fallopian tubes. After examining the endometrium of the bottom of the uterus, they begin to examine the tubal cells. You should pay attention to their presence, shape, size, nature and height of the endometrium in the area of the tube corners, the presence or absence of pathological formations. Approaching the end of the hysteroscope to the walls of the uterus, the endometrium and the vascular pattern of the surface of the front, back and side walls of the uterus are examined in detail. When pathological formations in the uterine cavity are detected, their consistency is determined with the help of hysteroscopic instruments, if necessary, intraoperative correction of the pathology is carried out. The final stage is a targeted biopsy of endometrial areas and a final examination of the uterine cavity. After the examination, the hysteroscope is removed from the uterine cavity .

### **Puncture of the abdominal cavity through the posterior vault**

#### **Procedure steps:**

1. Treat the external genitalia, vagina and cervix with an antiseptic.
2. Carefully, slowly and consistently insert a spoon-shaped mirror and lifter into the vagina, withdraw the vaginal part of the cervix. Hand over the lift to hold the assistant.

3. Grab the back lip of the cervix with ball forceps, remove the lifter, pass the spoon-shaped mirror to the assistant.
4. Using ball forceps, pull the cervix towards you and slightly upwards. Determine the place for the puncture (under the cervix along the middle line, retreating 1 cm from the place of transition of the posterior vault into the vaginal part of the cervix).
5. 1-2 ml of 0.25% solution of novocaine should be injected into the indicated puncture site (before using novocaine, a skin test should be performed for individual sensitivity to the drug ).
6. Perform a puncture of the posterior vault of the vagina with a thick puncture needle at least 12 cm long to a depth of no more than 2 cm (when punctured, there should be a feeling of "falling" of the needle into the void). Attach the puncture needle to the syringe. Pull the plunger of the syringe towards you. Place the contents of the abdominal cavity (pus, blood, exudate) in a sterile test tube for further examination.
7. Remove the syringe with the puncture needle, remove the ball forceps from the back lip of the cervix, treat the vagina with an antiseptic, remove the spoon-shaped mirror.

### **Requirements for work results, including to registration**

1. Collect the history of the gynecological patient
2. Conduct a mirror examination
3. Conduct manual research \_ \_
4. Collect material from the vagina, urethra and cervical canal and evaluate the results
5. Carry out and evaluate diagnostic tests for the functional state of the ovaries
6. Collect material for cytological examination and evaluate the results.
7. Carry out (on a phantom) probing of the uterus and fractional-therapeutic-diagnostic scraping of the mucous membrane of the uterus.

**- control materials for the final stage of the lesson: tasks, assignments, tests, etc.**

### **Test tasks**

#### **STEP-2 tests**

1) A 24-year-old woman came to the women's consultation with complaints about a 10-week delay in menstruation. She has 2 spontaneous miscarriages in her history. During the ultrasound examination, one fertile egg was found, which corresponds to 6-7 weeks of pregnancy, the heartbeat of the fetus was not determined. What is the next tactic in this situation?

F. Scraping of the walls of the uterine cavity\*

- G. Use of uterotonic agents
- H. Appointment of hormonal therapy
- I. Observation for 1 week followed by ultrasound control
- J. Appointment of antibacterial therapy

2) In a 36-year-old patient, during a preventive examination in mirrors, deformation of the cervix due to old postpartum tears was revealed. Colposcopic examination revealed areas of dysplasia on the posterior lip. What should be done to clarify the diagnosis?

- A. Biopsy of the cervix \*
- B. Diagnostic scraping
- C. Cystoscopy, irigoscopy
- D. Bacteriological examination of secretions
- E. Ultrasound of the pelvic organs

3) On the same night, a 62-year-old patient came to the clinic with complaints about the presence of watery discharge, sometimes bloody discharge from the vagina. Menopause 7 years. Periodically, the patient has slight pains in the lower abdomen, swelling of the intestines. During vaginal examination, the uterus is enlarged up to 10 weeks of pregnancy, has limited mobility, and is sensitive. Add-ons are not defined. What research should be conducted to clarify the diagnosis?

- A. Separate diagnostic scraping of the cervical canal and uterine cavity
- B. ultrasound
- C. Contrast radiography
- D. Cytological examination of smears
- E. Puncture of the posterior vault

**From the gift :**

1. Under the guidance of the teacher, students of higher education consider the main points of the scheme of medical manipulations in gynecology in a gynecological patient.
2. The teacher conducts a survey on control questions on the subject of the lesson.
3. The teacher distributes the performance of medical manipulations in gynecology to gynecological patients among the students of higher education:
  - Review in mirrors.
  - Collection of material for bacterioscopic, bacteriological and cytological studies.
  - Bimanual study.
  - Clinical examination of mammary glands.
  - Puncture of the abdominal cavity through the posterior vault of the vagina
4. Evaluate the results of a cytomorphological study.
5. Evaluate the results of a bacterioscopic examination.
6. Evaluate the results of pelvic ultrasound.
7. Evaluate the results of hysterosalpingography.

#### 4. Summarizing the results

**Current control:** survey, testing, evaluation of performance of practical skills, evaluation of communication skills during role play, solution of situational clinical tasks, evaluation of activity in class.

**Final control:** KPI

**Assessment of current activity in a practical session :**

1. Evaluation of theoretical knowledge on the subject of the lesson:
  - methods: survey, solving a situational clinical problem
  - assessment: maximum – 5, minimum – 3, unsatisfactory – 2
2. Evaluation of practical skills and manipulations on the subject of the lesson:
  - methods: assessment of the correctness of the performance of practical skills
  - assessment: maximum – 5, minimum – 3, unsatisfactory – 2
3. Evaluation of work with patients on the subject of the lesson:
  - methods: communication skills with the patient and his relatives; correctness of appointment and assessment of laboratory and instrumental studies; compliance with the differential diagnosis algorithm; substantiation of the clinical diagnosis; drawing up a treatment plan
  - assessment: maximum – 5, minimum – 3, unsatisfactory – 2

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

#### Current evaluation criteria in practical training

Rating	Evaluation criteria
Perfectly "5"	The applicant is fluent in the material, takes an active part in discussing and solving a situational clinical problem, confidently demonstrates practical skills. Excellently interprets the data of clinical, laboratory and instrumental studies, expresses his opinion on the topic of the lesson, demonstrates clinical thinking.
Fine "4"	The applicant has a good command of the material, participates in the discussion and solution of a situational clinical problem, demonstrates practical skills. Interprets the data of clinical, laboratory and instrumental studies well with some errors, expresses his opinion on the subject of the class, demonstrates clinical thinking.
Satisfactorily "3"	The acquirer does not have sufficient knowledge of the material, is unsure of participating in the discussion and solution of a situational clinical problem, demonstrates practical skills for and interprets clinical, laboratory and instrumental research data with significant errors.

Unsatisfactorily "2"	The acquirer does not possess the material, does not participate in the discussion and solution of the situational clinical problem, does not demonstrate practical skills.
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## 5. List of recommended literature.

### Main:

1. Obstetrics and gynecology: National a textbook for medical universities of IV accreditation levels in 4 vols.// Nat. textbook in 4 volumes / V.M. Zaporozhan, T.F. Tatarchuk, I.Z. Gladchuk, V.V. Podolsky, N.M. Rozhkovska, V.G. Marichereda, A.G. Volyanska. -K.: VSV "Medicine", 2017. - 696 c.
2. Training manual on midwifery (edited by I.B. Ventskivska, V.P. Lakatosha, V.M. Kushcha). - K., 2018. - RA-HARMONY - 210 p.
3. Obstetrics and gynecology: in 2 books. - Book 2. Gynecology: a textbook (University III-IU: r.a.) / V.I. Hryshchenko, M.O. Shcherbiny and others. - K.: Medicine, 2020. - 376 p.
4. Clinical Obstetrics and Gynaecology: 4th Edition / Brian A. Magowan, Philip Owen, Andrew Thomson. - 2021. - 454 p.
5. 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.

### Additional:

1. Order No. 417 dated 15.07.2011 "On the organization of ambulatory obstetric and gynecological care in Ukraine"
2. Intra-abdominal bleeding in gynecology: a monograph / I. Z. Gladchuk, O. Ya. Nazarenko, R. O. Tkachenko. - Odesa. : ONMedU, 2021. – 112 p.
3. Endoscopic surgery: training. manual / V.M. Zaporozhian, V.V. Grubnik, Yu.V. Grubnik, A.V. Malinovsky and others; under the editorship V.M. Zaporozhana, V.V. Grubnika - K.: VSV "Medicine", 2019. - 592 p.
4. Gynecology: a guide for doctors./ V.K. Likhachev. – Vinnytsia: Nova Kniga, 2018. - 688 p.
5. Family planning. Educational and methodological manual / N.G. Hoyda, O.V. Hryshchenko, V.P. Kvashenko, O.V. Kravchenko et al. / Kyiv, 2016. – 444 p.
6. Situational problems in gynecology: study guide. / I.Z. Gladchuk, A.H. Volyanska, G.B. Shcherbina and others; under the editorship Prof. FROM. Hladchuk - Vinnytsia: "Nilan-LTD" LLC, 2018.-164 p.
7. Oats, Jeremy Fundamentals of Obstetrics and Gynecology [Text]: Liewellyn-Jones Fundamentals of Obstetrics and Gynecology / J. Oats, S. Abraham. – 10<sup>th</sup> ed. – Edinburgh [etc.]: Elsevier, 2017. – VII, 375 p.
8. Obstetric risks in uterine fibroids: age aspect / Zhelezov D.M., Saleh O.S // East European Science Journal 1(41) 2019. - P. 50-52.
9. Complications of laparoscopic conservative myomectomy / I.Z. Gladchuk, D.M.

- Zhelezov, G.V. Shitova, N.A. Zarzhitska // Clinical and experimental pathology Vol. 18, No. 2(68), 2019. - P.168-173.
10. Laparoscopic myomectomy in patients with reproductive intentions (literature review) / I.Z. Hladchuk, G.V. Shitova, N.A. Zarzhitska // Health women - #2 (148) -2020. - pp. 75-85.
  11. Prevention of purulent-septic complications during laparoscopic surgeries on pelvic organs with the risk of vaginal microbiota contamination / Zaporozhan VN, Gladchuk IZ, Rozhkovska NM, Volyanska AG, Shevchenko OI // World of Medicine and Biology.-2020- №1(71) . - P.49-53. ( *Web of science*)

### **Electronic information resources**

1. <https://www.cochrane.org/> - Cochrane / Cochrane Library
2. <https://www.acog.org/> - The American College of Obstetricians and Gynecologists
3. <https://www.uptodate.com> – UpToDate
4. <https://online.lexi.com/> - Wulters Kluwer Health
5. <https://www.ncbi.nlm.nih.gov/> - National Center for Biotechnology Information / National Center for Biotechnology Information
6. <https://pubmed.ncbi.nlm.nih.gov/> - National Library of Medicine
7. <https://www.thelancet.com/> - The Lancet
8. <https://www.rcog.org.uk/> - Royal College of Obstetricians & Gynecologists
9. <https://www.npwh.org/> - Nurse practitioners in women's health
10. <http://moz.gov.ua> – Ministry of Health of Ukraine
11. [www.ama-assn.org](http://www.ama-assn.org) - [American Medical Association / American Medical Association](http://www.ama-assn.org)
12. [www.who.int](http://www.who.int) - [World Health Organization](http://www.who.int)
13. [www.dec.gov.ua/mtd/home/](http://www.dec.gov.ua/mtd/home/) - [State Expert Center of the Ministry of Health of Ukraine](http://www.dec.gov.ua/mtd/home/)
14. <http://bma.org.uk> - [British Medical Association](http://bma.org.uk)
15. [www.gmc-uk.org](http://www.gmc-uk.org) - [General Medical Council \( GMC \)](http://www.gmc-uk.org)
16. [www.bundesaerztekammer.de](http://www.bundesaerztekammer.de) – [German Medical Association](http://www.bundesaerztekammer.de)
17. [www.euro.who.int](http://www.euro.who.int) - [European Regional Office of the World Health Organization](http://www.euro.who.int)