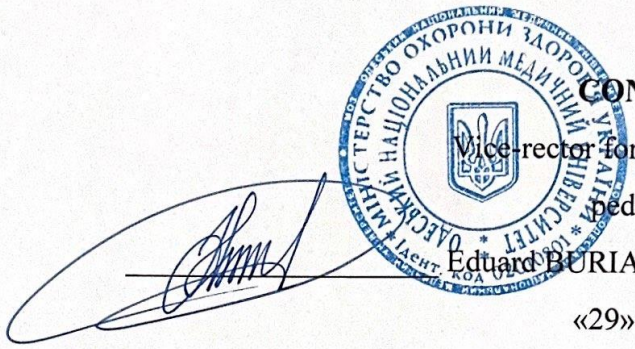
MINISTRY OF HEALTH OF UKRAINE
ODESA NATIONAL MEDICAL UNIVERSITY
DEPARTMENT OF OBSTETRICS AND GYNECOLOGY



CONFIRMED by
Vice-rector for scientific and pedagogical work
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«29» August, 2024

THE METHODICAL RECOMMENDATIONS FOR PRACTICAL CLASS

International Faculty, Course VI

Discipline “Obstetrics and Gynecology”

Practical lesson №29. Topic: Infertile marriage. Modern aspects of planning of a family. Methods of contraception. The criteria for the use of contraceptive methods by the WHO.

Approved:

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

Protocol No. 1 dated August 29, 2024.

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Practical lesson №29

INFERTILE MARRIAGE. MODERN ASPECTS OF PLANNING OF A FAMILY. METHODS OF CONTRACEPTION. THE CRITERIA FOR THE USE OF CONTRACEPTIVE METHODS BY THE WHO

Learning objective

The overall aim of this topic is to gain basic knowledge about etiology, pathogenesis aspects, diagnostic algorithm and tactics of treating infertility in marriage and the scope of the examination and the treatment plan of patients. Evaluate the results of the examination, make a preliminary diagnosis. Student must master the methods family planning issues and modern WHO approaches in choosing contraceptive methods.

Basic concepts:

1 Etiology and pathogenesis of female and male infertility.

2. Types of female infertility.

3. Examination of a couple in an infertile marriage.

4. Treatment approaches and methods in female infertility (hormonal, surgical, modern reproductive technologies).

5. Consultation on family planning: directions, advantages, consulting process.

6. Methods of contraception: COCs, vaginal ring, contraceptive patch, POPs, injections, IUD, barrier methods, spermicides, voluntary surgical sterilization, emergency contraception.

7. Methods of fertility evaluation.

8. Necessary examination prior to deciding upon usage of a specific contraceptive method.

9. Family planning in HIV-positive patients.

10. Selected practice recommendations for contraceptive use of WHO.

equipment

- Multimedia equipment (computer, projector, screen), TV.
- Obstetric models and obstetric instruments (pelvimeter, obstetric stethoscope, centimeter tape).
- Professional algorithms, structural-logical schemes, tables, videos.
- Results of laboratory and instrumental researches, situational tasks, patients, medical histories.

EDUCATIONAL TIME – 4 h

A. organizational stage

- Greetings,
- checking attendees,
- defining of educational goals,
- providing of positive motivation.

Infertility remains a neglected area in sexual and reproductive health, yet its consequences are staggering. Infertility is estimated to impact about 10–25% (estimates range from 48 to 180 million) of couples of reproductive age worldwide. It is associated with adverse physical and mental health outcomes, financial distress, severe social stigma, increased risk of domestic abuse, and marital instability. Because of worsening of demographic setting in Ukraine, increased frequency of infertility marriages (rises up to 15-20% from all marriages), problem of treating damages of reproductive function became very actual.

Combination of many etiologic factors which lead to infertility often does not give an opportunity to reveal main and secondary causes of the problem and set adequate treatment. During last few years main methodic for treating infertility stays endoscopy.

Family planning is essential to promoting the well-being and autonomy of women, their families and their communities. Quality of care in family planning is paramount for ensuring progress towards achieving high standards of health for all. WHO medical safety criteria of contraception provide guidance regarding "how" to use contraceptive methods safely and effectively.

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

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

Knowledge requirements:

- Communication and clinical examination skills.
- Ability to determine the list of required clinical, laboratory and instrumental studies and evaluate their results.
- Ability to make a preliminary and clinical diagnosis of the disease

- Ability to perform medical manipulations
- Ability to determine the tactics of physiological pregnancy, physiological labor and the postpartum period.
- Ability to keep medical records.

List of didactic units:

1. Collect general and special history, an allocation of a typical case-patient data.

2. Interpret data from a survey of case-patients.

3. Formulate a diagnosis of thematic patient, the differential diagnosis, to appoint a treatment plan.

4. Perform gynecological examination (mirror, bimanual, rectal).

5. Taking material from the vagina, cervical canal and urethra for examination.

6. Evaluate: the results of urogenital smear microscopy, cytological examination, colposcopy; results of bacteriological and other methods; results of ultrasound examination; results of functional tests.

7. Make the plan of methods for diagnosing infertility in coupe.

8. Formulate a diagnosis of thematic patient, the differential diagnosis, to appoint a treatment plan Survey methods in gynecology.

9. Make the plan of family planning counseling

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

Questions:

1. Etiology and pathogenesis of female and male infertility.

2. Types of female infertility.

3. Examination of a couple in an infertile marriage.

4. Treatment approaches and methods in female infertility (hormonal, surgical, modern reproductive technologies).

5. Consultation on family planning: directions, advantages, consulting process.

6. Methods of contraception: COCs, vaginal ring, contraceptive patch, POPs, injections, IUD, barrier methods, spermicides, voluntary surgical sterilization, emergency contraception.

7. Methods of fertility evaluation.

8. Necessary examination prior to deciding upon usage of a specific contraceptive method.

9. Family planning in HIV-positive patients.

10. Selected practice recommendations for contraceptive use of WHO.

formation of professional skills (mastering skills, conducting curation, determining the treatment regimen, conducting a laboratory study, etc.).

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

Interactive task:

Students of the group are divided into 3 subgroups of 3-4 people each. They work in the classroom, reception department of the maternity or gynecological hospital, surgery room.

Tasks:

- Subgroup I - Gather special gynecologic anamnesis. Prepare a plan of inspection sick with various kinds of gynecological diseases. Make the plan of preoperative preparation at planned and urgent gynecologic operations. Management of the postoperative period.
- Subgroup II - Perform gynecological examination- Taking material from the vagina, cervical canal and urethra for examination.- Evaluate: the results of urogenital smear microscopy, cytological examination, colposcopy; results of bacteriological and other methods; results of ultrasound examination; results of functional tests
- Subgroup III – to assess answers of subgroups I and II and makes adjustments.

Tests:

Direction: For each of the multiple- choice questions select the lettered answer that is the one best response in each case.

1. Female 26 years has addressed with complaints of infertility for 3 years. Menstruation in 14 years, painless, moderate. Cycle 4.5 / 28 regular. At the age of 16 underwent appendectomy. Postkoital test and analysis of sperm in the normal

range. According to the measurement of basal body temperature ovulatory cycles, phase is 12-14 days. Define the most appropriate method of diagnosis:

A. Laparoscopy.

B. Hysteroscopy.

C. Colposcopy.

D. Endometrial biopsy.

E. Hysterosalpingography.

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

A. Spermogram.

B. Metrosalpingography.

C. Functional diagnostic tests.

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

E. Bacteriological study of discharge from the genital tract.

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

A. Secondary infertility.

B. Chronic adnexitis.

C. Primary infertility.

D. Apoplexy ovary.

E. Pelvioperitonite.

4. Female 18 years, complains of lack of pregnancy within 1 year of regular sexual life. From pregnancy is not guarded. Pregnancy was not. If bimanual examination revealed no pathology. From what method should begin examination of this couple?

A. Spermogram.

B. Hysterosalpingography.

C. Laparoscopy.

D. Tests of functional diagnostics.

E. Bacterial sowing.

5. The gynecologist has addressed patient '29 complaining of infertility. Sex life living in married 4 years, pregnancy is not guarded. Pregnancy was not. The examination found women: development of sex organs no abnormalities. Fallopian tubes pass. Basal temperature for three menstrual cycles of single-phase. The most likely cause of infertility?

A. Anovulatory menstrual cycle.

B. Chronic adnexitis.

C. Anomaly of genitalia.

D. Immunological infertility.

E. Genital endometriosis.

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

A. Laparoscopy.

B. Semen sex partner.

C. Measurement of basal temperature.

D. Postkoital test.

E. Hysteroscopy.

7. Patient 29 years, from the history, the patient had three non-developing pregnancies in the early stages. For the last 3 years, she has been sexually active without protection.

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

A. Bacteriological study of discharge from the genital tract.

B. Testing for syphilis.

C. Screening for tuberculosis.

D. Clinical analysis of blood.

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

8. A 34-year-old patient consulted a gynecologist about the impossibility of getting pregnant after 4 years she has the following symptoms: obesity, hirsutism,

hypomenstrual syndrome. When pelvic ultrasound was found endometrial hyperplasia. An indication of what state is this conclusion?

A. Persistent corpus luteum.

B. Inflammatory process endometrium.

C. Chronic anovulation.

D. Hypothyroidism.

E. Normal state of the endometrium.

9. In '28 women complaining of secondary infertility during diagnostic laparoscopy installed inside endometriosis. In history - chronic salpingooforites. Most likely pathogenetic factor infertility in women is this:

A. Local secretion of prostaglandins.

B. Violations of the synthesis of cortisol in the adrenal glands.

C. Thickening protein shell ovaries.

D. Congenital underdevelopment of genitals.

E. Increasing the viscosity of cervical mucus.

10. Patient '25 entered the gynecological department with complaints of fever up to 38.7 ° C, abdominal pain, and purulent vaginal discharge. From history: 6 years ago introduced the intrauterine device. If bimanual examination, the cervix is cylindrical with symptoms cervicitis, discharge from the cervical canal, mustache palpable spiral. Painful body of the uterus normal size. Appendages painful on both sides. Parametriy is free. Select tactics:

A. Hysteroscopy, antibiotic.

B. Anti-inflammatory treatment.

C. Analysis vaginal discharge, antibiotic.

D. Analysis vaginal discharge, antibiotic.

E. Separate scraping the uterine lining.

F. Removal intrauterine device, antibiotic.

11. The gynecologist for prophylactic examinations approached a woman 25 years of history knows that it often changes sexual partners. The doctor asked her to use a drug that is both spermicidal and bactericidal effect of a wide spectrum. What preparation was offered a gynecologist?

A. Erotex.

B. Polizhinaks.

C. Terzhinan.

D. Klion-D.

E. Pimafucin.

12. Female 24, the right builds, satisfying food. Menstruation at age 14, 3-5 / 28 days, mild, painless, regular. First Pregnancy, childbirth first. Since the birth took 2 weeks.Assign a contraceptive method:

A. Intrauterine tool.

B. Barrier method.

C. Postkoital contraception.

D. Injectable.

E. Lactation amenorrhea.

13. Patient 40 years has three children in marriage, appealed to the gynecologist with a view to the selection method of contraception. Healthy.For the purpose of contraception most reasonably purpose:

A. Intrauterine product.

B. Spermicides.

C. Oral contraceptives.

D. Surgical sterilization.

E. Rhythm meth

3.2. Educational materials, recommendations (instructions) for performing tasks

A. Infertility.

Infertility - Inability to achieve a recognized pregnancy after trying to conceive (sex at least 1 time per week without protection) for: 1 year (U.S. ACOG) or 2 years (WHO).

According to statistics, about 15% of couples do not achieve pregnancy within 1 year and seek medical treatment for infertility. Eventually 5% remain unwillingly childless. Infertility affects both men and women. In 50% of involuntarily childless couples a male infertility associated factor is found together with abnormal semen parameters. A fertile partner may compensate for the fertility problem of the men and thus infertility usually becomes manifest if both partners have reduced fertility.

Any irregularities in the process of maturation of gametes and fertilization process may condition the impossibility of conceiving.

Types of Infertility:

A. Female infertility.

B. Male infertility.

C. The combined sterility.

The most common causes of male infertility are:

A. Anatomical/genetic causes – anorchia, congenital factors (testicular dysgenesis), acquired factors (trauma, testicular torsion, tumor, surgery), maldescended testes Klinefelter's syndrome, other chromosomal alterations germ cell aplasia Complete and focal germ cell aplasia (Sertoli cell-only syndrome), surgeries that can damage vascularization of the testes.

B. Endocrine disorders - hypothalamic dysfunction (Kallmann's), pituitary failure (tumor, radiation, surgery), hyperprolactinemia (drug, tumor), exogenous androgens, thyroid disease, adrenal hyperplasia.

C. Abnormal spermatogenesis - mumps orchitis chemical/radiation/heat exposure, varicocele, cryptorchidism medications systemic diseases (liver cirrhosis, renal failure), testicular tumor, post-inflammatory.

D. Abnormal motility - antisperm antibodies, varicocele, Kartagener's syndrome, idiopathic.

E. Sexual dysfunction - retrograde ejaculation, impotence, decreased libido.

The causes of female infertility include:

A. Central (CNS)/Endocrine – PCOS, advanced maternal age, premature ovarian failure, hypothalamic amenorrhea, hyperprolactmemia.

B. Tubal - PID/salpingitis, tubal ligation.

C. Pelvic/peritoneal - pelvic adhesions, endometriosis.

D. Endometrial/uterine - congenital malformations, submucosal fibroids, uterine polyps, intrauterine synechias (Asherman's syndrome).

E. Cervical/mucus - Miillerian duct abnormality, cervical stenosis, cervicitis or chronic inflammation, des exposure in uterus.

F. Unexplained.

Infertility can be:

A. absolute in the presence of irreversible changes of the reproductive system, pregnancy when naturally impossible

B. relative, when the probability of conception is not excluded, but significantly reduced.

There are only four factors of absolute sterility:

A. absence of sperm

B. ovarian absence

C. the absence of the fallopian tubes

D. the absence of uterus

Infertility is divided into: Primary, Secondary.

A. Primary infertility: absence of a live birth at specific ages (e.g. > age 30) in non-contracepting population

B. Secondary infertility: absence of a live birth > 5 years in persons with prior births

The definition of "primary" and "secondary" Infertility is not just a woman. With regard to man primary infertility means that from this man none of his partners do not become pregnant. Secondary infertility is considered as one of the men had at least one pregnancy at least at one of its partners.

Combined infertility - a combination of female and male infertility occur combined form. In the case where both spouses are normal indicators of their reproductive function, but special tests indicate their incompatibility, the latter is regarded as a special form of infertile marriages, requires a special approach in determining treatment strategy.

Idiopathic infertility - infertility can also be observed among perfectly healthy and well compatible couples. These are cases of unclear or unexplained or idiopathic infertility.

Unclear infertility - a special problem can be called "unexplained" infertility. Often it is impossible to find out the reason, even with the help of modern methods of diagnosis.

The endocrine form of infertility is caused by a violation of the hormonal regulation of the menstrual cycle, ovulation provides. This can be caused by injury or diseases of the hypothalamic-pituitary region, excessive secretion of the hormone prolactin, polycystic ovary syndrome, progesterone deficiency, tumor and inflammatory lesions of the ovary, and so on. D.

Tubal infertility form occurs in cases where there are anatomical obstacles in the way of promotion for the egg fallopian tubes into the uterus, t. E., Both fallopian tubes are absent or are impassable. In peritoneal infertility obstruction does not occur in the fallopian tubes themselves, and between the tubes and the ovaries. Tuboperitoneal infertility usually occurs as a result of adhesive processes or atrophy of the cilia inside the pipe to ensure the promotion of the egg.

The master batch form of infertility is caused by anatomical (congenital or acquired), uterine defects. Congenital uterine anomalies are its underdevelopment (hypoplasia), doubling the presence of saddle uterus or intrauterine septum. Acquisition of uterine defects are intrauterine adhesions or scar deformity, tumor. Acquired uterine malformations develop as a result of intrauterine interventions, which include surgical abortion - abortion.

Infertility caused by endometriosis is diagnosed in approximately 30% of women suffering from this disease. The mechanism of the impact of endometriosis on infertility completely unclear, however, we can say that in the areas of endometriosis and ovarian tubes inhibit normal ovulation and egg movement.

The emergence of forms of immune infertility due to the presence of sperm antibodies in women,

That is, specific immunity produced against sperm or embryo.

In more than half of cases, infertility is not caused by a single factor, but a combination of 2-5 or more reasons. In some cases, the causes of the infertility remain unknown, even after a full examination of the patient and her partner. Infertility of unknown origin found in 15% of the surveyed couples.

Doctors believe that the "vague" psychogenic infertility and is most likely, with the features of sexual relations or with the unconscious desire of women to have a baby. In such cases it will be good to ask for help to a family psychologist.

False infertility - the so-called "false" infertility. Common options are: the woman is being treated for infertility using all possible means, including hormonal preparations, but does not live sexual life due to the prolonged absence of a partner; the woman many years treated for infertility, but accidentally found out that she was after each sexual intercourse produces vaginal douching; woman watching her rectal temperature and allows husband intimacy only after the rise of temperature. All these cases may seem a curiosity, but they are not so rare.

The World Health Organization (WHO) has classified ovulatory factor infertility into 3 groups:

1. Hypothalamic-pituitary failure (Hypothalamic amenorrhea),

2. Hypothalamic-pituitary dysfunction (PCOS, anovulation, oligomenorea, luteal phase defects, hyperprolactinemia, thyroid dysfunction),

3. Ovarian failure (premature ovarian failure, advanced maternal age)

Examination of infertile married couples.

Diagnostic evaluation includes:

1. Signs
2. History
3. Ultrasound examination
4. MRI / CT
5. Hysterosalpingography
6. Endocrine evaluation (FSH, LH, prolactin, estrogen, testosterone, thyroid function tests, etc.)
7. Laparoscopy
8. Endometrial biopsy

For a successful attack of spontaneous pregnancy requires the following components: fertility, i.e., capable of fertilization, the sperm; mature egg (Raj); tubal patency; cored oil genitals female (uterus, cervix, vagina normal structure.

Therefore, all survey infertile couple is aimed at what would have to figure out which of the above-mentioned components is broken.

The first phase of a fertility survey - a thorough examination of past and present medical history of the couple, the so-called medical history. This is followed by inspection of the spouses. Traditionally, the Russian medicine woman examines a gynecologist, a man - an urologist. In many cases, on the basis of medical history and examination data of the spouses, it is already possible to make a preliminary conclusion about the possible cause / causes of infertility, as well as to exclude certain conditions, lead to infertility.

Just on the basis of information obtained during the interview and examination of the spouses is made up of the initial survey.

Required laboratory tests. There is a so-called list of mandatory tests, which performed all couples who seek infertility, regardless of the history and examination. These include:

• Blood type, Rh factor;

• General blood analysis; tested for HIV, HBS-Ag (Hepatitis B), HCV (hepatitis C), RW discs (syphilis) antibodies to rubella, toxoplasmosis antibodies (the latter two need to take only a woman);

• Test for gonorrhea and chlamydia, mycoplasma, ureaplasma;

• Cervical cytology.

The next group of studies carried out, which would assess the condition of mandatory pregnancy components.

To clarify the status of semen is carried out semen analysis. The analysis shall not less than three but not more than 7 days of sexual abstinence. The result is a standard semen analysis shows the number of sperm per unit volume, the number of motile sperm (the basic parameters that determine the ability of sperm to fertilize an egg), the number of abnormal forms of sperm, sperm liquefaction time, the number of leukocytes (white blood cell count increased - an indirect sign of infection). If the result of the first sperm is not normal, it is necessary to repeat the sperm study once again in 6-8 weeks. The egg is fully mature for fertilization soon after ovulation. Thus, when examining infertility, it is necessary to find out there is a woman has a regular (once a month) or no ovulation. If there is no ovulation, or it does not happen often - independent pregnancy impossible or highly unlikely. There are direct and indirect signs of ovulation.

Indirect signs of the presence / absence of ovulation can be detected with a history (past medical history) and additional survey data.

a. Regular menstrual cycle and / or the presence of pregnancies in the past - these are signs that indicate that a woman is likely (but not in all cases), there is a regular (once a month), ovulation. Irregular menstrual cycle may indicate that ovulation does not occur or does not occur every month, which eliminates or significantly reduces the chances of pregnancy.

b. Basal temperature measurement. Basal body temperature before ovulation is slightly lower than after ovulation. After ovulation occurred basal temperature rises to 0.4-0.5 degrees, and remains in this range for at least three days (ideally - before the next period). This method has low sensitivity compared with other tests assessing ovulation. The often basal body temperature chart shows no ovulation in a cycle, whereas in fact it is happening. That is why recently this method is not used to assess the presence / absence of ovulation.

c. Determining the level of progesterone in the blood in the middle of the second phase of the menstrual cycle (on day 21 of the cycle during the 28-day cycle). The analysis should be carried out on an empty stomach to 12 hours of the day.

The menstrual cycle is divided into two phases. The level of progesterone in the middle of the second phase can retrospectively say whether the woman ovulate in this cycle or not. No ovulation - no progesterone production. This test is highly specific and sensitive.

a. Tests on urine ovulation. These tests operate on the principle of a pregnancy test on the urine. They also retrospectively indicate whether the woman ovulate in this cycle or not. They are less sensitive than a blood test for progesterone.

b. Violation of the production of certain hormones can suppress ovulation, which is not always expressed in violation of the menstrual cycle parameters. That's why all the women with infertility test is performed to evaluate thyroid, pituitary (a blood test for thyroid-stimulating hormone, prolactin). Those who have irregular menstrual cycle have also carried out tests on the number of male sex hormones (androgens) in the blood (testosterone, DHEA-S). Excess androgens inhibit ovulation.

Direct signs of the presence / absence of ovulation.

1. Ovarian ultrasound monitoring. The process of maturation in the ovary can be controlled with the help of ultrasound. The egg matures in the ovary in a special formation called a follicle. The follicle on ultrasound looks like a bubble. If seen with repeated ultrasound follicle first gradual increase to a size not less than 18-20 mm in diameter in one of the ovaries, and then its disappearance with simultaneous appearance of a small amount of fluid behind the uterus - is indicative of ovulation held.

2. Laparoscopy - this surgical intervention, which allows the surgeon to look directly into the abdominal cavity and assess the state of the internal reproductive organs. Make small incisions, one in the navel and one or two in the groin area. Through these incisions are introduced into the abdominal cavity of a small camera, and surgical tools. If the second phase is present in the ovary yellow body - iron, which is formed immediately after ovulation and produces progesterone - with a small hole on the surface - this is direct evidence of ovulation held in the menstrual cycle.

Also to become pregnant, the fallopian tubes should be passable. The assumption that the impassable fallopian tubes can be made in patients that have one or more of the factors listed below:

a. painful menstruation and / or painful sexual life;

b. operations on the pelvic organs in the past;

c. complications associated with the use of an intrauterine device;

d. acute inflammation of the appendages in the past;

e. gonorrhea and / or chlamydia in the past;

f. Presence of antibodies to chlamydia in the blood test with a negative test for chlamydia in the cervix (usually, this test is conducted with women primary infertility).

There are several ways to evaluate tubal patency.

a. Histerosonografiya - a holding transvaginal ultrasound with simultaneous introduction of a small amount of sterile fluid into the uterus. If the fallopian tubes are passable, it can be seen on ultrasound as the liquid is poured behind the uterus. Sami fallopian tubes in most cases are not visible on ultrasound. The method is practically painless and requires no special training.

b. Hysterosalpingography - an introduction to the uterus of contrast material and then performing a series of X-rays. If the pipes are passable, contrast freely poured into the abdominal cavity, and this is clearly seen in the photographs.

c. Laparoscopy. The uterus is introduced sterile liquid color is blue, and the surgeon directly assesses the eye, the fluid fills and pours the fallopian tubes into the abdominal cavity. Existing barriers to exit of fluid from the pipe, if possible, can be immediately eliminated.

Assessment of the internal genital organs. Anatomy (structure) internal genital female organs can be assessed during gynecological examination. Often, however, the data is not very accurate. In addition, during the inspection it is impossible to look inside the uterus and to assess the structure of the uterine cavity. Therefore, this simple gynecological examination always complemented one (depending on medical indication) of the following methods:

a. pelvic ultrasound;

b. Hysteroscopy (see operative gynecology.);

c. Laparoscopy (see. Section operative gynecology).

If a problem is detected in the semen analysis results, in this case we speak of male infertility. If the survey shows a lack of ovulation, then talk about the ovulatory infertility. If a woman's fallopian tubes, then it comes to tubal infertility. About 50% of couples are so-called combined (male and female) infertility. Around 15% of cases in all surveys on infertility from both women and men from the show normal results, there is no obvious reason for infertility. In this case, the diagnosis is "unexplained infertility". This suggests that the current level of development of health does not know all the mechanisms involved in the process of conception and, therefore, cannot yet reveal all the possible reasons for not getting pregnant.

Prognosis varies with:

A. Age

B. Primary vs. secondary infertility

C. Duration of infertility

D. Type and severity of pathology

E. Single vs. multiple causes

F. Male, female, or both affected

G. Smoking, caffeine, nutrition Modern principles and methods of treatment of female infertility (hormonal, surgical, artificial reproductive technologies).

The diagnosis of "infertility" is put a woman on the ground, if for 1 year or more with regular sexual relations without the use of methods of protection she had no pregnancy occurs. Of absolute sterility to say, if present in the patient anatomical irreversible changes that make it impossible to conceive (absence of ovaries, fallopian tubes, uterus, and genitals serious anomalies development). With relative infertility reasons it caused, can be subjected to medical correction.

Also distinguish primary infertility - in the absence of a history of a woman is pregnant, and secondary - if you cannot re-occurrence of pregnancy.

Infertility in marriage occurs in 10-15% of couples. Of these, 40% of infertility cases the causes are rooted in the male (impotence, defective sperm, and ejaculation disorders), and the remaining 60% - it's about female infertility. The causes of infertility can be a violation related to health of one spouse or both of them, so you need a survey of each of the partners.

In addition to factors of physical health, infertility can result in marital mental and social disadvantage.

To choose the right tactics treatment of infertility is necessary to determine the reasons why he had been summoned.

Diagnosis of infertility

For the diagnosis and identify the causes of infertility women should consult a gynecologist. Important is the collection and evaluation of information about the patient's general and gynecological health. At the same time clarified:

1. Complaints (health, the duration of the absence of pregnancy, pain, its location and connection with menstruation, changes in body weight, the presence of secretions from the breast and reproductive tract, and psychological climate in the family).

1. Family and hereditary factors (infectious and gynecological diseases in the mother, and the next of kin, the age of the mother and father at the birth of the

patient, the state of their health, bad habits, number of pregnancies and births to mothers and their course, the health and age of the husband).

2. The patient's disease (previous infection, including sex, surgery, trauma, gynecological and comorbidities).

3. The character of menstrual function (age at first menstrual period, the assessment of regularity, duration, painful menstruation, the amount lost by the menstrual blood, the duration of existing violations).

4. Assessment of sexual function (age of onset of sexual activity, number of sexual partners and marriage, the nature of sexual relations in marriage - libido, frequency, orgasm, discomfort during intercourse, previously used methods of contraception).

5. Childbearing (availability and number of pregnancies, especially their occurrence, outcome during childbirth, the presence of complications in childbirth and after).

6. Methods of examination and treatment, if they were carried out earlier, and their results (laboratory, endoscopic, radiological and functional methods of examination, medication, surgical, physical therapy and other treatments and tolerability).

7. Methods of physical examination in the diagnosis of infertility. Physical examination methods are divided into general and specific: - general survey methods in the diagnosis of infertility allow to assess the overall condition of the patient. These include inspection (determination of body type, evaluation of skin and mucous membranes, the nature of hair distribution, condition and degree of development of the mammary glands), palpation study of the thyroid gland, stomach, measurement of body temperature, blood pressure.

8. Methods of special gynecological examination of patients with infertility are many and include laboratory, functional, instrumental and other tests. To eliminate neuroendocrine disease (pituitary lesions) patients with disruption of the menstrual rhythm is carried out X-ray of the skull and sella. The range of diagnostic procedures for infertility colposcopy necessarily included to detect signs of erosion, cervicitis endocervicitis and serving the manifestation of a chronic infection. With hysterosalpingography (X-ray uterus and fallopian tubes) revealed abnormalities and tumors of the uterus, intrauterine adhesions, endometriosis, tubal obstruction, adhesions often causes infertility. Conducting Ultrasound allows you to explore the permeability of winding tubes.

To clarify the status of the endometrium is performed diagnostic curettage of the uterus. The resulting material was subjected to histological examination and conformity assessment of changes in the endometrium of the menstrual cycle day.

Surgical methods of diagnosis of infertility

For surgical infertility diagnosis methods include hysteroscopy and laparoscopy.

A. Hysteroscopy - This endoscopic examination of the uterus using an optical device, the hysteroscopy introduced through the outer cervix.

In accordance with the recommendations of WHO - the World Health Organization introduced a modern gynecology conduct a compulsory Diagnostic hysteroscopy in patients with standard form of infertility.

Indications for hysteroscopy are:

A. infertility primary and secondary, habitual miscarriage;

B. Suspected hyperplasia, endometrial polyps, intrauterine adhesions, abnormality of the uterus, adenomyosis, etc. .;

C. fibroids growing in the uterus;

Hysteroscopy allows you to consistently inspect inside the cervix, uterus, its front, rear and side surfaces of the right and left the mouth of the fallopian tubes, to assess the condition of the endometrium and to identify abnormal formation. Hysteroscopic study is usually performed in a hospital under general anesthesia. During hysteroscopy the doctor can not only see the inner surface of the uterus, but also to remove some tumors or take a fragment of endometrial tissue for histological analysis. After hysteroscopy statement is made in the minimum (from 1 to 3 days) time.

B. Laparoscopy is an endoscopic examination of organs and pelvic cavity through optical devices introduced through micro-incision anterior abdominal wall.

As with hysteroscopy can be performed for infertility diagnostic or therapeutic purposes. Laparoscopy is performed under general anesthesia in a hospital. The main indications for laparoscopy in gynecology are:

A. Infertility primary and secondary;

B. Ectopic pregnancy, ovarian apoplexy, uterine perforation and other urgent conditions;

C. Obstruction of the fallopian tubes;

D. Endometriosis;

E. Uterine fibroids;

F. Cystic changes of ovaries;

G. Adhesions in the pelvis, and others.

The indisputable advantages of laparoscopy are bloodless operation, the absence of expressed pain and rough seams in the postoperative period, the minimum risk of postoperative adhesions process. Usually 2-3 days after laparoscopy the patient to be discharged from the hospital.

Surgical endoscopic procedures are less traumatic, but highly effective in diagnosing infertility and its treatment, and widely used for examination of women of reproductive age.

Infertility Treatment

The issue of the treatment of infertility is made after receiving and evaluating the results of all the surveys and the establishment of the reasons he was called. Usually, treatment begins with removing the primary causes of infertility.

Treatment methods used in female infertility are aimed at:

1. Restoration of the patient's reproductive function by conservative or surgical methods.

2. The use of assisted reproductive technology in cases where natural conception impossible.

When endocrine infertility form the correction of hormonal disorders and stimulation of the ovaries. For non-medicated type of correction are normalized weight (obesity) by diet therapy and increased physical activity, physiotherapy. The main type of drug treatment of endocrine infertility is hormonal therapy. The process of follicle maturation is monitored by ultrasound and monitoring of the dynamics of blood hormone levels. With proper selection and compliance with hormone treatment in 70-80% of patients with this form of infertility become pregnant. When tubal-peritoneal form of infertility treatment is to restore order to the Fallopian tubes using laparoscopy. The effectiveness of this method in the treatment of tubal peritoneal infertility is 30-40%. When long-existing pipe or an adhesive obstruction after failure before the operation, it is recommended in vitro fertilization.

In cases where the mother forms of infertility - anatomical defects of its development - are carried out reconstructive plastic surgery. The probability of pregnancy in these cases is 15-20%. At impossibility of surgical correction of uterine infertility (absence of the uterus, expressed her malformations) and self-bearing pregnant women use the services of surrogate motherhood.

Infertility caused by endometriosis, treated with laparoscopic, during which removed the pathological lesions. Result laparoscopy fixed rate of drug therapy. The percentage of pregnancy is 30-40%. When forms of immunological infertility is commonly used artificial insemination

Insemination by the sperm of husband. This method allows you to bypass the immune barrier of the cervical canal and contributes to pregnancy in 40% of cases of immune infertility.

Treatment unidentified forms of infertility are the most difficult problem. Most often in these cases, resorted to the use of auxiliary methods of reproductive technology.

Assisted Reproductive Technologies (ART)

A. Ovarian induction (OI)

B. Intrauterine insemination (IUI)

C. In-vitro insemination (IVF)

D. Gamete intrafalopian transport (GIFT)

E. Zygote intrafalopian transport (ZIFT)

F. Intracytoplasmic sperm injection (ICSI)

G. Testicular sperm extraction (TSE)

H. Microsurgical epididimal sperm aspiration(MESA)

Transvaginal Ultrasound-Guided Needle Aspiration of Oocytes. Following ovulation induction, multiple eggs are removed from the ovaries by placing a vaginal probe into the vagina. A fine needle is guided toward the ovary while the physician visualizes the follicles on ultrasound. Fluid around the follicles is then collected through a needle connected to a test tube.

Intracytoplasmic sperm injection (ICSI). A spermatid or spermatozoon is collected by ejaculation or aspiration from the epididymis or testis. One sperm is injected directly into each harvested egg. The embryos are then transferred back into the uterine cavity.

Gamete intrafalopian transport (GIFT). After ovulation induction, oocytes are harvested transvaginal. The oocytes and washed sperm are then placed into the fallopian tube by laparoscopy or transcervical method where fertilization takes place.

In-vitro insemination (IVF). After ovulation induction, oocytes are harvested transvaginal. The egg and sperm are placed together in the laboratory and fertilization takes place. The fertilized embryos are transferred into the uterine cavity through the cervix.

Assisted Reproductive Technologies (ART) Clomiphene citrate is an antiestrogen that binds to estrogen receptors in the hypothalamus to cause increased FSH and LH production, thereby promoting follicular maturation and ovulation. Clomiphene citrate is best used for women with chronic anovulation or mild hypothalamic insufficiency after specific causes of hypothalamic dysfunction have been ruled out. Human menopausal gonadotropins are forms of FSH or FSH and LH that directly stimulate follicular maturation in patients for whom Clomid has failed, or those with hypothalamic or pituitary failure or unexplained infertility. The primary complications of fertility drugs include ovarian hyperstimulation and multiple gestation pregnancy. IVF, GIFT, ZIFT, and ICSI may be used to bypass the normal mechanisms of gamete transport with fertilization with deliveries in about 30% of cases.

II. Modern aspects of family planning.

Family Planning - as defined by the World Health Organization includes a range of activities that contribute to the solution of several problems simultaneously:

- avoid unwanted pregnancies

- have only wanted children

- adjust the spacing between pregnancies

- control the timing of the birth of the child, depending on the age of the parents

- To establish the number of children in the family

Family planning has become synonymous with contraception, but it is not. In other words, family planning involves the use education about reproduction and birth control in order to allow women to make decision about their fertility and family size.

Having a baby is one of the most important moments in the life of any woman. Only the prospect of healthy, physically and mentally full baby will not spoil during his expectations. This is the main purpose of family planning. Pregnancy planning is necessary in order to give birth to a healthy baby and how you can easily transfer all the burdens associated with his birth. Incubation child is stressful for the mother's body, so you should be well prepared for it.

The first step should be a visit to the doctor, and a medical examination is necessary to pass both prospective parents. At the reception, the gynecologist asks in detail about the presence of chronic and hereditary diseases, previous pregnancies, contraceptive methods, peculiarities of work and lifestyle.

Aside from the gynecologist to the future parents should consult a physician, dentist, ENT doctors and other professionals. In case of detection of any pathology of the

internal organs it must be cured before the moment of conception, as it can have a negative impact on the course of pregnancy and your baby. In chronic diseases it is important to achieve stable remission.

Comprehensive examination must include delivery of the analysis of urine and blood, including sexually transmitted infections. In the absence of treatment they can lead to abortion (miscarriage), malformations, infection of the fetus or fetal development time of passage through the birth canal.

Diagnostics

Plan of complex inspection before planning pregnancy:

1. Survey of the gynecologist.

2. Inspection of the therapist.

3. Blood tests:

- Blood group and Rh factor of both spouses;

- study titer antibodies to the Rh factor (in rhesus-negative women even if husband too negative Rh factor);

- Clinical blood test;

- biochemical studies: total bilirubin, ALT, AST, alkaline phosphatase, alpha-amylase, blood sugar, urea, creatinine, total protein, albumin, globulin, total cholesterol, glycosylated hemoglobin;

- Test for syphilis;

- Analysis for hepatitis B and C;

- Analysis for rubella;

- Antibodies to herpes type II;

- Antibodies to CMV;

- Antibodies to Toxoplasma (toxoplasmosis);

- Antibodies to chlamydia.

4. Urine analysis.

5. The study of hormones.

7. Pelvic ultrasound. Kidneys, bladder, abdominal cavity, thyroid, mammary glands.

8. Study of the cervix uteri.

9. Colposcopy and cytology.

10. smears, bacteriological tests.

11. PCR diagnostics.

General orientation in contraceptive methods: COCs, vaginal ring, contraceptive patch, POPs, injections, IUD, barrier methods, spermicides. Methods of fertility evaluation, voluntary surgical sterilization, emergency contraception.

Contraceptives are devices, drugs, or methods for preventing pregnancy, either by preventing the fertilization of the female egg by the male sperm or by preventing implantation of the fertilized egg.

Contraceptive options

Choosing the appropriate contraceptive is a personal decision. Contraceptive options include:

- Hormonal contraceptives (oral contraceptives, skin patch, vaginal ring, implant, injection)
- Intrauterine devices (IUDs), which contain either a hormone or copper
- Barrier devices with or without spermicides (diaphragm, cervical cap, sponge, condom)
- Fertility awareness methods (temperature, cervical mucus, calendar)
- Female sterilization (tubal ligation)
- Vasectomy

Non-Hormonal/Barrier includes:

A. Abstinence (avoiding sex) could be considered the ultimate barrier method—if it is practiced consistently – because there is no possibility of a sperm reaching an egg. However, abstinence and periodic abstinence (avoiding sex during a woman's fertile time) may be difficult methods for some adolescents to use effectively (1).

B. The same is true for the "withdrawal" method, formally called coitus interruptus and also known as "pulling out"—meaning that the penis is taken out of the vagina prior to ejaculation. Although withdrawal is commonly practiced, the fluid in the penis before ejaculation can contain sperm and ejaculation often occurs before complete withdrawal. Sperm deposited on or near the vagina can result in pregnancy. Some research suggests that withdrawal may be a fairly effective method for preventing pregnancy (2); however, it does not protect against STDs and it is especially difficult for sexually inexperienced couples to use effectively. The

condom is the only birth control method that provides protection against sexually transmitted diseases (STDs).

TYPES OF EMERGENCY CONTRACEPTION

Two emergency contraceptive pills may be bought without a prescription:

1. Plan B One-Step is a single tablet that contains 1.5 mg of levonorgestrel.

2. Next Choice is taken as two doses, which each contain 0.75 mg of levonorgestrel. Both pills can be taken at the same time or as two separate doses 12 hours apart.

3. Either may be taken for up to 5 days after unprotected intercourse.

4. Ulipristal acetate (Ella) is a new type of emergency contraception pill that requires a prescription from a health care provider. Ulipristal is taken as a single tablet. It may be taken up to 5 days after unprotected sex.

Two other methods that may be used to prevent pregnancy after unprotected sex are:

5. Birth control pills. Talk to your health care provider about the correct dosage. In general, you must take 2 - 5 birth control pills at the same time to have the same protection.

6. A copper-releasing intrauterine device (IUD) may be used as an alternative emergency contraception method. It must be inserted by your health care provider within 5 days of having unprotected sex. Your doctor can remove it after your next period, or you may choose to leave it in place to provide ongoing birth control.

Emergency contraception should not be used as a routine birth control method. It is less effective at preventing pregnancies than most types of birth control.

Female Sterilization

Female surgical sterilization (also called tubal sterilization, tubal ligation, and tubal occlusion) is a low-risk, highly effective one-time procedure that offers lifelong protection against pregnancy. About 700,000 women undergo this procedure each year in the United States.

Basics of female sterilization

Female surgical sterilization procedures block the fallopian tubes and thereby prevent sperm from reaching and fertilizing the eggs. The ovaries continue to function normally, but the eggs they release break up and are harmlessly absorbed by the body. Tubal sterilization is performed in a hospital or outpatient clinic under local or general anesthesia.

Sterilization does not cause menopause. Menstruation continues as before, with usually very little difference in length, regularity, flow, or cramping. Sterilization does not offer protection against sexually transmitted diseases.

Specific tubal sterilization techniques

1. Laparoscopy. Laparoscopy is the most common surgical approach for tubal sterilization:

The procedure begins with a tiny incision in the abdomen in or near the navel. The surgeon inserts a narrow viewing scope called a laparoscope through the incision.

A second small incision is made just above the pubic hairline, and a probe is inserted.

Once the tubes are found, the surgeon closes those using different methods: clips, tubal rings, or electrocoagulation (using an electric current to cauterize and destroy a portion of the tube).

Laparoscopy usually takes 20 - 30 minutes and causes minimal scarring. The patient is often able to go home the same day and can resume intercourse as soon as she feels ready.

2. Minilaparotomy. Minilaparotomy does not use a viewing instrument and requires an abdominal incision, but it is small -- about 2 inches long.

The tubes are tied and cut. Generally speaking, Minilaparotomy is preferred for women who choose to be sterilized right after childbirth, while laparoscopy is preferred at other times. Minilaparotomy usually takes approximately 30 minutes to perform. Women who undergo Minilaparotomy typically need a few days to recover and can resume intercourse after consulting their doctor.

3. Essure. The Essure method uses a small spiral-like device to block the fallopian tube.

Unlike tubal ligation, the Essure procedure does not require incisions or general anesthesia. It can be performed in a doctor’s office and takes about 45 minutes. A specially trained doctor uses a viewing instrument called a hysteroscopy to insert the device through the vagina and into the uterus, and then up into the fallopian tube. Once the device is in place, it expands inside the fallopian tubes. During the next 3 months, scar tissue forms around the device and blocks the tubes. This results in permanent sterilization.

Candidacy for female sterilization

Before undergoing sterilization, a woman must be sure that she no longer wants to bear children and will not want to bear children in the future, even if the circumstances of her life change drastically. She must also be aware of the many

effective contraceptive choices available. Possible reasons for choosing female sterilization procedures over reversible forms of contraception include:

Not wanting children and being unable to use other methods of contraception

Health problems that make pregnancy unsafe

Genetic disorders

If married, both partners should completely agree that they no longer want to have children and should also have ruled out vasectomy for the man. Vasectomy is a simple procedure that has a lower failure rate than female surgical sterilization, carries fewer risks, and is less expensive.

Even if all these factors are present, a woman must consider her options carefully before proceeding. Women at highest risk for regretting sterilization include:

Women who are younger at the time of sterilization

Women who had the procedure immediately after a vaginal delivery

Women who had the procedure within 7 years of having their youngest child

Women in lower income groups

If a woman changes her mind and wants to become pregnant, a reversal procedure is available, but it is very difficult to perform and requires an experienced surgeon. Subsequent pregnancy rates after reversal depend on the surgeon's skill, the age of the woman, and, to a lesser degree, her weight and the length of time between the tubal ligation and the reversal procedure. Not all insurance carriers cover the cost of reversal.

Advantages of female sterilization

Women who choose sterilization no longer need to worry about pregnancy or cope with the distractions and possible side effects of contraceptives. Sterilization does not impair sexual desire or pleasure, and many people say that it actually enhances sex by removing the fear of unwanted pregnancy.

Disadvantages and complications of female sterilization

Failure is rare, less than 1%, but can occur. More than half of these pregnancies are ectopic, which require surgical treatment. After any of the procedures, a woman may feel tired, dizzy, nauseous, bloated, or gassy, and may have minor abdominal and shoulder pain. Usually these symptoms go away in 1 - 3 days. Serious complications from female surgical sterilization are uncommon and are most likely to occur with abdominal procedures. These rare complications include bleeding, infection, or reaction to the anesthetic.

Family planning in HIV-positive persons.

While having children is definitely an option for HIV-positive women (and men), it requires careful planning with a health care provider. This includes "preconception" planning—exploring available options to help you conceive—and taking necessary steps during pregnancy (whether it's planned or unplanned) to protect your health and your baby's. With a significant spread of HIV, it can play a significant role in the morbidity and mortality. Medical aid sick requires significant costs for diagnosis and treatment, but the disease is still incurable. Therefore, the most essential elements of the epidemic are prevention and control measures.

Indications and contraindications to the use of the method

Indications for use of the method are:

1. HIV-infected women - pregnancy for more than 13 weeks or birth;

2. For a child born to an HIV-infected mother:

3. Age not more than 72 hours (3 days) in the absence of life-feeding mother's milk;

4. If feeding mother's milk (regardless of duration) - a period of no more than 72 hours (3 days) after the last feeding mother's milk.

Contraindications for use of the method are a pregnancy of less than 14 weeks.

Application method

- Following antiretroviral drugs can be used with the aim of chemoprophylaxis: AZT (AZT) = Retrovir (state registration number R-8-242-N 008 440) = Timazid (N 2000/54/9) = Nevirapine Viramune (R-8-242-N 011046) Phosphazide (F-AZT) = Nikavir (N 99/358/4)

- The introduction of methods of HIV transmission from mother to child chemoprophylaxis reduces the probability of infection of the child is 3 - 5 times.

- For the purpose of prevention of HIV transmission from mother to child to all pregnant women who are planning to keep the pregnancy should be offered an HIV test.

- It is necessary to carry out testing of pregnant twice: in the primary treatment for pregnancy and if the infection has not been identified at the first testing in the third trimester of pregnancy (34 - 36 weeks).

- Women who have not been tested for HIV during pregnancy, it is recommended to get tested at admission to the maternity hospital to give birth.

- In an emergency, if you cannot waiting for the results of the standard HIV test, the decision to hold chemoprophylaxis taken upon detection of HIV antibodies

using rapid test kits, approved by Ministry of Health of Russia. However, to establish a woman HIV diagnosis results obtained by using only rapid test is insufficient - it is necessary to confirm the diagnosis by ELISA and immune blotting.

• Testing accompanied by counseling, which includes pre- and post-test parts. Counselling should be conducted by professionals who have been trained. In pre-test counseling, in addition to the standard questions asked in any HIV testing (what HIV is, how to prevent HIV infection, which is carried out the test, which can be test results), a pregnant woman should discuss specific issues:

- The risk of transmitting HIV to your baby during pregnancy, childbirth and breastfeeding;

- The possibility of HIV transmission to the child;

- The possible outcomes of pregnancy;

- The need for follow-up of mother and child;

- The possibility of informing about the test results of the sexual partner (s), family.

During the post-test counseling is necessary to repeat the information provided by the patient prior to testing. At post-test counseling of pregnant women were HIV-positive, you should elaborate on the issues of the relationship of HIV and pregnancy, the risk of transmission of HIV from mother to child, and how to prevent it, feeding the newborn, the diagnosis of HIV in children, women of reproductive behavior.

Features of follow-up and delivery in pregnant women with HIV

• Pregnant women with a diagnosis of HIV infection occur together with infusionist Territorial Center for Prevention and Control of AIDS and Infectious Diseases (hereinafter - the HIV / AIDS Center), and obstetrician-gynecologist (depending on the circumstances of each administrative territory - in the HIV / AIDS Center in the antenatal clinic in the community, in a specialized antenatal clinic or in a specialized reception, etc.).

• During the period of follow-up of HIV-infected pregnant and giving birth it is recommended to avoid any procedure that violated the integrity of the skin, mucous membranes and increases the baby's contact with the mother's blood (amniocentesis, chorionic villus sampling, etc.).

• During labor undesirable prolonged rupture of membranes (more than 4 hours), since a child's risk of infection, according to research, increased by 2 times. When conducting birth vaginally recommended vaginal treatment of 0.25% aqueous solution of chlorhexidine when applying for a birth (in the first vaginal

examination), and in the presence of vaginitis - at each subsequent vaginal examination. Newborn baby held hygienic bath with 0.25% chlorhexidine solution (50 ml of 0.25% chlorhexidine solution for 10 liters of water).

• All obstetric manipulation (procedure) should be strictly justified. When a live fetus is not recommended for labor induction, rodousilenie, perineo (Scenes) tomy, forceps, vacuum extraction of the fetus, etc. All of these procedures increase the risk of infection of the fetus and their purpose is possible only for health reasons.

• Planned caesarean section before the onset of labor and rupture of membranes (after reaching 38 weeks of gestation) to prevent fetal exposure to infected maternal secrets of the body and therefore may be a method to prevent HIV transmission from mother to child. If unable to chemoprophylaxis elective caesarean section can be used as an independent method of prophylaxis during labor. However, HIV infection is not an absolute indication for cesarean section. The decision on the method of delivery is taken on an individual basis, taking into account the interests of the mother and fetus, comparing the situation in a particular benefit from the likely reduces the risk of infection of the child during cesarean section with the risk of complications after surgery (pathological blood loss and the development of septic complications).

Chemoprevention of HIV transmission from mother to child

1. Transmission of HIV from mother to child is possible during pregnancy, particularly in the later stages (15 - 25% of the number of cases of infection of the child) during childbirth (60 - 85%) and milk-feeding mothers (12 - 25%). The risk of infection increases the child, if the mother was infected during the six months prior to pregnancy and during pregnancy, or if the pregnancy is in the later stages of HIV infection (stage 4B - 4B of the Russian Classification of HIV infection).

2. Chemoprevention of HIV transmission from mother to child includes:

- Chemoprophylaxis during pregnancy;

- Chemoprophylaxis during childbirth;

- Chemoprophylaxis newborn.

The most successful results occur during all three components of chemoprophylaxis. However, if any of the components cannot hold chemoprophylaxis, it is not a reason for refusal of the next stage.

3. Before the appointment of chemoprophylaxis doctor, appointing her conversation (counseling) is conducted with a woman, in which a pregnant informed about the purpose of chemoprophylaxis, explains the probability of the birth of HIV-infected children during the prevention or abandon it, given information about

possible side effects from the drugs. The patient is asked to sign an informed consent for chemoprophylaxis.

4. If pregnant HIV-infected woman is under medical supervision during pregnancy, chemoprophylaxis it appoints doctor infectious diseases HIV / AIDS Center, or an infectious diseases doctor health facilities (depending on the conditions of the territory), which give recommendations for chemoprophylaxis during labor (it holds the doctor obstetrician-gynecologist, a leading childbirth) and newborn (it assigns the neonatologist or pediatrician). If HIV infection detected during childbirth, maternity chemoprophylaxis prescribed and conducted by an obstetrician-gynecologist doctor, a leading childbirth (see chart), and the newborn child - Neonatologist or Pediatrician (see diagram).

5. To prevent infection of the newborn to be children born to HIV-infected women do not apply to the chest and not to feed the mother's milk, and immediately after birth transfer to artificial feeding.

6. The use of chemoprophylaxis full in all three stages significantly reduces the risk of infection of the child - with 28 - 50% 3 - 8%. Such efficiency with sufficient safety for the mother and the fetus proved only for circuits with AZT and / or Nevirapine.

7. If the patient is pregnant, there are indications for antiretroviral therapy; it should be administered in view of the need to prevent HIV transmission from mother to fetus and maximum safety for the fetus - the section "Features of antiretroviral therapy in pregnant women."

3.3. Requirements for the results of work.

1. Collect general and special history, an allocation of a typical case-patient data.

2. Interpret data from a survey of case-patients.

3. Formulate a diagnosis of thematic patient, the differential diagnosis, to appoint a treatment plan.

4. Perform gynecological examination (mirror, bimanual, rectal).

5. Taking material from the vagina, cervical canal and urethra for examination.

6. Evaluate: the results of urogenital smear microscopy, cytological examination, colposcopy; results of bacteriological and other methods; results of ultrasound examination; results of functional tests.

7. Make the plan of methods for diagnosing infertility in coupe.

8. Formulate a diagnosis of thematic patient, the differential diagnosis, to appoint a treatment plan Survey methods in gynecology.

9. Make the plan of family planning counseling

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

Tests

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

A. Laparoscopy.

B. Hysteroscopy.

C. Colposcopy.

D. Endometrial biopsy.

E. Hysterosalpingography.

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

A. Spermogram.

B. Metrosalpingography.

C. Functional diagnostic tests.

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

E. Bacteriological study of discharge from the genital tract.

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

A. Secondary infertility.

B. Chronic adnexitis.

C. Primary infertility.

D. Apoplexy ovary.

E. Pelvioperitonite.

4. Female 18 years, complains of lack of pregnancy within 1 year of regular sexual life. From pregnancy is not guarded. Pregnancy was not. If bimanual examination revealed no pathology. From what method should begin examination of this couple?

A. Spermogram.

B. Hysterosalpingography.

C. Laparoscopy.

D. Tests of functional diagnostics.

E. Bacterial sowing.

5. The gynecologist has addressed patient '29 complaining of infertility. Sex life living in married 4 years, pregnancy is not guarded. Pregnancy was not. The examination found women: development of sex organs no abnormalities. Fallopian tubes pass. Basal temperature for three menstrual cycles of single-phase. The most likely cause of infertility?

A. Anovulatory menstrual cycle.

B. Chronic adnexitis.

C. Anomaly of genitalia.

D. Immunological infertility.

E. Genital endometriosis.

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

A. Laparoscopy.

B. Semen sex partner.

C. Measurement of basal temperature.

D. Postkoital test.

E. Hysteroscopy.

7. Patient 29 years, from the history, the patient had three non-developing pregnancies in the early stages. For the last 3 years, she has been sexually active without protection.

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

A. Bacteriological study of discharge from the genital tract.

B. Testing for syphilis.

C. Screening for tuberculosis.

D. Clinical analysis of blood.

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

8. A 34-year-old patient consulted a gynecologist about the impossibility of getting pregnant after 4 years she has the following symptoms: obesity, hirsutism, hypomenstrual syndrome. When pelvic ultrasound was found endometrial hyperplasia. An indication of what state is this conclusion?

A. Persistent corpus luteum.

B. Inflammatory process endometrium.

C. Chronic anovulation.

D. Hypothyroidism.

E. Normal state of the endometrium.

9. In '28 women complaining of secondary infertility during diagnostic laparoscopy installed inside endometriosis. In history - chronic salpingooforites. Most likely pathogenetic factor infertility in women is this:

A. Local secretion of prostaglandins.

B. Violations of the synthesis of cortisol in the adrenal glands.

C. Thickening protein shell ovaries.

D. Congenital underdevelopment of genitals.

E. Increasing the viscosity of cervical mucus.

10. Patient '25 entered the gynecological department with complaints of fever up to 38.7 ° C, abdominal pain, and purulent vaginal discharge. From history: 6 years ago introduced the intrauterine device. If bimanual examination, the cervix is cylindrical with symptoms cervicitis, discharge from the cervical canal, mustache palpable spiral. Painful body of the uterus normal size. Appendages painful on both sides. Parametriy is free. Select tactics:

A. Hysteroscopy, antibiotic.

B. Anti-inflammatory treatment.

C. Analysis vaginal discharge, antibiotic.

D. Analysis vaginal discharge, antibiotic.

E. Separate scraping the uterine lining.

F. Removal intrauterine device, antibiotic.

11. The gynecologist for prophylactic examinations approached a woman 25 years of history knows that it often changes sexual partners. The doctor asked her to use a drug that is both spermicidal and bactericidal effect of a wide spectrum. What preparation was offered a gynecologist?

A. Erotex.

B. Polizhinaks.

C. Terzhinan.

D. Klion-D.

E. Pimafucin.

12. Female 24, the right builds, satisfying food. Menstruation at age 14, 3-5 / 28 days, mild, painless, regular. First Pregnancy, childbirth first. Since the birth took 2 weeks.Assign a contraceptive method:

A. Intrauterine tool.

B. Barrier method.

C. Postkoital contraception.

D. Injectable.

E. Lactation amenorrhea.

13. Patient 40 years has three children in marriage, appealed to the gynecologist with a view to the selection method of contraception. Healthy.For the purpose of contraception most reasonably purpose:

A. Intrauterine product.

B. Spermicides.

C. Oral contraceptives.

D. Surgical sterilization.

E. Rhythm meth

B. Summing up

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

Criteria for current assessment on the 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.

Recommended literature

Basic:

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5. Beckmann and Ling's Obstetrics and Gynecology, Eighth, North American Edition, Dr.Robert Casanova, May 3, 2018 Beckmann and Ling's Obstetrics and Gynecology, Eighth, North American Edition, Dr.Robert Casanova, May 3, 2018

6. The Linde's operative gynecology - John A.Rock, 2020