MINISTRY OF HEALTH OF UKRAINE

ODESA NATIONAL MEDICAL UNIVERSITY

Department of Obstetrics and Gynecology

APPROVED

Vice-rector for scientific and pedagogical work

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September 1st, 2025

METHODOLOGICAL RECOMMENDATIONS FOR PRACTICAL CLASSES ON THE ACADEMIC DISCIPLINE "OBSTETRICS AND GYNECOLOGY"

Level of higher education: second (master's degree)

Field of knowledge: 22 «Health care»

Specialty: 221 "Dentistry"

Educational and professional program: Dentistry

Approved:

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

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Practical lesson No. 1
Topic: "Physiology of pregnancy. Methods of examination of pregnant women"

Aim: To acquaint students on the impact of additional processes on a woman's body during pregnancy. Ensuring vital activity, growth and development of the embryo and fetus in the mother's body undergo significant changes that affect almost all body systems. Compensatory changes in the organs and systems of a pregnant woman's body lead to changes in homeostasis to a state of unstable, tense equilibrium. Violations of this balance can lead to a change in homeostasis and the realization of one or another obstetric and extragenital pathology, which the dentist needs to know about.

Basic concepts: The perinatal period includes the time before childbirth - antenatal, during childbirth - intranatal and after childbirth - neonatal periods. Physiology of pregnancy and its main aspects of management. Possibilities of using methods of examination of pregnant women used in modern obstetrics**.**

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 identify higher education graduates for responsibility and consistency in work, sensitivity and tolerance in the attitude towards a pregnant woman. To teach the student logical clinical thinking and diagnostic methods that are new to him, to provide an opportunity for the student to independently solve an atypical problem, with an independent choice of the solution path, to develop a sense of responsibility for the correctness of professional actions in the students.

Have specialized conceptual knowledge acquired in the process of training. To be able to solve complex tasks and problems arising in professional activity. Clear and unambiguous presentation of one's own conclusions, knowledge and explanations, which are substantiated, to specialists and non-specialists. Be responsible for making decisions in difficult conditions, have deep knowledge of the structure of professional activity. Be able to carry out professional activities, update and integrate knowledge. The ability to effectively form a communication strategy in professional activities. To bear responsibility for development, the ability for further professional training with a high level of autonomy.

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

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

Knowledge requirements:

-to know the level of provision of inpatient obstetric and gynecological care to the population;

- to know the functions of a dentist in examining pregnant women;

- draw up a plan for the primary laboratory examination at the first visit of a pregnant woman to a women's consultation;

- to interpret the main performance indicators of the obstetric hospital.

List of didactic units:

-have an understanding of what "Physiological pregnancy" means;

- to have an understanding of the pathological forms that occur during "Physiological pregnancy"

- to have concepts representing methods of examination of pregnant women. examination of a pregnant woman

Questions (tests, tasks, clinical situations) to check the basic level of knowledge on the subject of the lesson.

Questions:

- Critical periods of embryo and fetal development.
- Impact of harmful factors on the embryo and fetus.
- Physiological changes in a woman's body during pregnancy.
- Hygiene and nutrition of a pregnant patient.
- Methods of examination of pregnant women.
- External and internal obstetric examination of pregnant women.
- Topography of the fetus in the uterus.
- Management of physiological pregnancy.
- Preconception care.

Situational tasks:

1. A 20-year-old patient adressed to a women's consultation to determine the presence of pregnancy. She does not remember the date of her last period. For the last 2 months, She was protected from pregnancy. For 10 days, nausea has been bothering her, aversion to meat food has appeared. When examining with the mirror, cyanosis of the mucous membrane of the vagina and cervix draws attention. During bimanual examination: the uterus is in hyperanteflexion, slightly enlarged, rounded, softened, the appendages are not defined. What are the possible signs of pregnancy?

Answer: Diagnosis: Nausea, aversion to meat food. Cyanosis of the mucous membrane of the vagina and cervix.

2. A 22-year-old patient adressed to a women's consultation with complaints of delayed menstruation for 2 months, a craving for spicy food, nausea, drowsiness, and an aversion to tobacco smoke. During bimanual examination: the uterus is in hyperanteflexion, enlarged to the size of a goose egg, asymmetry in the region of the left angle is detected. What are the likely signs of pregnancy?

Answer: Diagnosis: Absence of menstruation, hyperanteflexion and asymmetry of the uterus

3. A 35-year-old woman, G2P2 , was examined by methods of external obstetric examination in a women's consultation. The gestation period is 37-38 weeks. When palpating the uterus above the entrance to the small pelvis, a soft part of the fetus is palpated, which does not move. A dense rounded part is defined in the right hypochondrium, the back of the fetus is turned to the left and back in relation

to the wall of the uterus. The fetal heartbeat is clear, rhythmic 140 beats per minute on the left above the level of the navel. Determine the type of fetus orientation in the uterus?

Answer: Diagnosis: Breech presentation, left posterior position .

Typical test tasks:

1. 1.During the first examination of a pregnant woman, a pregnancy of 32 weeks was diagnosed. Pregnancy course is physiological. Where should the fundus of uterus be located?
   A. At the level of the navel.
   B. Midway between the xiphoid process and the umbilicus.
   C. 4 cm below the xiphoid process.
   D. Under the xiphoid process.

2.Gravida I, 25 years old, LMP was on March 3, 2023. He has been feeling fetal movements since August 2, 2023. Determine the expected date of delivery:
   A. November 10.
   B. December 10.
   C. January 10.
   D. December 30.

2. During the external obstetric examination, the abdomen of the pregnant woman has a transversely oval shape. A round, dense part of the fetus is palpated in the left side, and in the right - a large soft part of the fetus, which is not movabale. The heartbeat of the fetus is heard at the level of the navel. What is the lie, position and presentation of the fetus?
   A. Transverse lie, II position, the presenting part is absent.
   B. Oblique lie, I position, the presenting part is absent
   C. Longitudinal lie, I position, head presentation.
   D. Transverse lie, I position, the presenting part is absent

Correct answers:

1 – B, 2 – B; 3 – D

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

- Task content (tasks, clinical situations, etc.)

Interactive task:

Students in the group are divided into 3 subgroups of 4-5 people each. We work in classes with gynecological patients, we give tasks:

And the subgroup - to make a preliminary diagnosis.

Subgroup II - to draw up a patient management plan.

Subgroup III – evaluates the correctness of the answer of subgroups I and II and makes its corrections.

Non-typical situational tasks:

1. A woman came to doctor with complaints about the absence of menstruation for 3 months. The patient is also bothered by nausea, aversion to meat food, occasional vomiting in the morning.

Age 25, married, no pregnancies. Menstruation from the age of 13, regular after 28 days for 4-5 days. When taking anamnesis, it was found that the patient suffers from chronic tonsillitis, chronic pyelonephritis. On examination: the patient has a correct physique, satisfactory nutrition. Height 155 cm, body weight 52 kg. The skin and visible mucous membranes are pale pink, clean. Pelvis dimensions: 26-28-31-21 cm. Solovyov's index 15 cm. Blood pressure 115/66 mmHg. Pulse 72 bpm. No pathology was detected on the part of the internal organs.

During a bimanual examination: the external genitalia are developed correctly, cyanosis of the mucous membrane of the cervix and vagina is noted, the vagina is narrow, the bottom of the uterus is palpated above the pubic symphysis, soft in consistency, uterine tone increases on palpation. The appendages are not palpable. Mucous discharge.

1. Diagnosis. Specify the likely signs that confirm pregnancy.

2. List the laboratory and instrumental studies that should be performed at the first visit of a pregnant woman to a doctor.

The answer:

1. Pregnancy I, 12 weeks. Absence of menstruation for 3 months, enlargement of the uterus up to 12 weeks. pregnancy, cyanosis of the mucous membrane of the cervix and vagina, softening of the uterus, contraction of the uterus during palpation.

2. Laboratory studies: general analysis of urine (including a test for the presence of protein), culture of urine (detection of asymptomatic bacteriuria), determine blood group and Rh type, general blood analysis with determination of the number of platelets and hematocrit, serological examination for syphilis, HIV test - infection, test for the presence of HbsAg, smear for cytology, smear for flora (according to indications), ultrasound.

2. Primapara, 23 years old, came to the maternity hospital with a full-term pregnancy and complaints of contractions that started 4 hours later. Contractions last 20-25 seconds, repeated every 4-5 minutes. The general condition of woman is satisfactory. Body temperature is 36.7 °C. Blood pressure 120/80 mm Hg, heart rate is 80 in 1 minute.

The position of the fetus is longitudinal, the back is turned to the left wall of the uterus, the head is located 4 fingers above the symphysis. The fetal heartbeat is clear, rhythmic, 156 beats in 1 minute.

Internal obstetric examination: the vagina is free, the cervix is smooth, the edge is thin, the external oss has a diameter of 2 cm. The amniotic sac is intact. The fetal head is presented. The promontorium is inaccessible, the terminal lines and the inner surface of the symphysis, except for the upper edge, are partially palpable.

1. Diagnosis

2. Does the rate of opening of the cervix correspond to the period and phase of labor?

The answer:

1. Pregnancy I, 39-40 weeks. Longitudinal lie, 1st position, occipital anterior presentation. Labor I, in term, I period of childbirth. Latent phase.

2. In this case, the rate of opening of the cervix corresponds to the latent phase of the first period of labor, since the cervix was smoothed out in 4 hours, and the diameter of the cervical canal was 2 cm.

Non-typical test tasks:

Pregnant, 37 y.o., at term 36 weeks. During the external obstetric examination, the abdomen of the pregnant woman has a transverse oval shape, in the left side wall of the uterus a round, dense part of the fetus that is found, in the right - a soft part of the fetus that is not movable. The heartbeat of the fetus is heard at the level of the navel.

What is the position, position and presentation of the fetus?

A. Transverse lie, I position.

B. Occipital anterior right preseentation

C. Left posterior breech presentation

D. Occipital posterior right presantation

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

3.1. Impact of harmful factors on the embryo and fetus.

3.2. Developmental disorders of the embryo and fetus are divided into the following groups

3.3. Harmful factors, affecting the fetus:

2. Physiological changes in a woman's body during pregnancy

4.1. Psychological conditions

4.2. Uncomfortable states

4.3. Immune system

4.5. central nervous system

4.6. Cardiovascular system

4.7. Blood system

4.8. Gastrointestinal tract

4.9. Metabolism

4.10. Kidneys

4.11. Genitalia

4.12. Body weight

4.13. Musculoskeletal system

Changes in the female body during pregnancy:

During pregnancy, significant physiological changes occur in a woman's body, which ensure the proper development of the fetus, prepare the body for future childbirth and feeding. During this difficult period, the load on all organs and systems of a woman's body increases significantly, which can lead to exacerbation of chronic diseases and the development of complications. That is why you should register as early as possible in a women's consultation, undergo all the necessary

specialists and pass tests. This will allow you to take adequate preventive measures and prepare for childbirth.

Heart.

The cardiovascular system during pregnancy performs more intense work, because an additional placental circle of blood circulation appears in the body. Here, the blood flow is so great that 500 ml of blood passes through the placenta every minute. The heart of a healthy woman during pregnancy easily adapts to additional loads: the mass of the heart muscle and cardiac output of blood increase. To meet the growing needs of the fetus in nutrients, oxygen and building materials in the mother's body, the volume of blood begins to increase, reaching a maximum by the 7th month of pregnancy. Instead of 4000 ml of blood, now 5300-5500 ml circulates in the body. In pregnant women with heart diseases, this load can cause the development of complications, that is why at the time of 27-28 weeks they are recommended to be referred to specialized maternity hospitals for conducting functional tests and drawing up a plan for further management of pregnancy and childbirth.

Blood pressure.

Blood pressure during normal pregnancy practically does not change. On the contrary, in women who have an increase in it before or in the early stages of pregnancy, in the middle of pregnancy it usually stabilizes and is within the range of 100/60-130/85 mmHg. This is due to a decrease in the tone of peripheral blood vessels under the influence of the progesterone hormone. However, in the last trimester of pregnancy, blood pressure can rise, reaching very high values. High blood pressure (140/90 mmHg and higher) is one of the signs of preeclampsia in pregnant women. This condition is very dangerous and may require emergency delivery.

Lungs

In connection with the increase in the need of a woman's body for oxygen during pregnancy, the activity of the lungs increases. Despite the fact that as pregnancy progresses, the diaphragm rises up and limits the respiratory movements of the lungs, their capacity increases. This happens due to the expansion of the chest, as well as due to the expansion of the bronchi. An increase in the volume of inhaled air during pregnancy facilitates the removal of used oxygen by the fetus through the placenta. The frequency of breathing does not change, it remains 16-18 times per minute, slightly increasing until the end of pregnancy. Therefore, with the appearance of shortness of breath or other breathing disorders, a pregnant woman should consult a doctor.

Kidneys.

During pregnancy, the kidneys function with great stress, because they remove the metabolic products of the pregnant woman and her growing fetus from the body. In addition, the pregnant uterus, turning slightly to the right, can cause difficulty in the outflow of urine from the right kidney. In this case, the risk of hydronephrosis increases, that is, the expansion of the pelvis and cups due to excessive accumulation of urine in them.

Digestive organs.

Many women in the first 3 months of pregnancy experience changes in their digestive organs: nausea and vomiting often appear in the morning (signs of early gestosis), taste sensations change, and a craving for unusual substances (clay, chalk) appears. The liver during pregnancy works with a greater load, because it neutralizes the products of the woman's and the fetus' metabolism.

Joints.

During pregnancy, women develop some laxity in their joints. The joints of the pelvis become especially mobile, which facilitates the passage of the fetus through it during childbirth. Sometimes the softening of the pelvic joints is so pronounced that a slight separation of the pubic bones is observed. Then the pregnant woman has pains in the pubic symphasis, a "duck" gait.

Mammary glands.

During pregnancy, the mammary glands prepare for future feeding. They have an increased number of particles, adipose tissue, and improved blood supply. Mammary glands increase in size, nipples become swell.

Genitals.

The biggest changes during pregnancy occur in the genitals and affect mainly the uterus. The pregnant uterus constantly increases in size, by the end of pregnancy its height reaches 35 cm instead of 7-8 cm for non-pregnant size, the weight increases to 1000-1200 g (without the fetus) instead of 50-100 g. The volume of the uterine cavity at the end of pregnancy increases approximately 500 times. The change in the size of the uterus occurs due to the increase in the size of muscle fibers under the influence of placental hormones. Blood vessels expand, their number increases, they seem to wrap around the uterus. Irregular contractions of the uterus are observed, which become more active by the end of pregnancy and feel like "squeezing". These so-called Braxton-Hicks contractions, normally observed from the 30th week of pregnancy, are considered as training before the real contractions in labor. The position of the uterus changes according to its size. By the end of the 3rd month of pregnancy, it goes beyond the pelvis, and closer to labor date, it reaches the hypochondrium. The uterus is held in the correct position by ligaments that thicken and stretch during pregnancy. Pains that occur on the sides of the abdomen, especially when changing body position, are often caused by ligament tension. The blood supply to the external genitalia increases, varicose veins may appear in the vagina and on the labia (the same varicose veins may also appear on the lower limbs and in the rectum).

An increase in body weight.

Fetal growth and physiological changes in a pregnant woman's body affect her body weight. By the end of pregnancy, a healthy woman's body weight increases by an average of 12 kg, with variations from 8 to 18 kg. Usually, in the first half of pregnancy, it increases by 4 kg, in the second half - by 2 times more. Weekly weight gain up to 20 weeks is approximately 300 +30 g, from 21 to 30 weeks - 330 +40 g, and after 30 weeks before childbirth - 340 +30 m. In women with a low body weight before pregnancy, weekly weight gain can be even more.

Psychology of women.

In addition to physiological changes in the body, the mental state of a pregnant woman changes. A woman's attitude to pregnancy and childbirth is influenced by various factors, including social, moral-ethical, economic and other factors, as well as the characteristics of the personality of the pregnant woman herself.

In the first half of pregnancy, many women are more concerned about their own health, and in the second half, especially after the appearance of fetal movements, all the thoughts and concerns of the expectant mother are directed to the well-being of the fetus. A woman can address a child with kind words, she fantasizes, endowing him with individual characteristics. Along with this, many women consciously give up some preferences and habits for the sake of future motherhood.

Also, pregnant women may have various fears and anxieties. During this period, a woman may be concerned about changes in her appearance, loss of attractiveness, and relationships with her husband. Close relatives (especially the husband) should become a reliable support for the pregnant woman and try to provide the woman with psychological comfort. In case of severe anxiety and depression, a pregnant woman is recommended to seek the advice of a specialist.

Hormones and pregnancy.

It is known that a lot of changes occur in the body during pregnancy, and many of them are due to hormonal changes. How do these indicators change?

- Blood parameters during pregnancy
- General blood analysis
- Coagulogram.
- Biochemical analysis of blood

Topography of the fetus in the uterus.

To clarify the location of the intrauterine fetus in obstetrics, the following terms are proposed: habitus, lie, position, type and presentation.

Habitus - the relation of the limbs and head of the fetus to its trunk. With normal articulation, the fetal body is bent, the head is inclined to the chest, the legs are bent at the hip and knee joints and pressed to the abdomen, the arms are crossed on the chest.

The lie of fetus (situs) is the ratio of the axis of the fetus to the axis (longitudinal) of the uterus. Here is the fetus - a line running along the back from the nape of the neck to the coccyx.

Fetal lie options:

1. longitudinal lie - the axis of the fetus coincides with the longitudinal axis of the uterus;

2. transverse lie - the axis of the fetus and the axis of the uterus intersect at a right angle; both large parts of the fetus are located above the crista iliaca;

3. oblique lie - the axis of the fetus and the axis of the uterus cross at an acute angle, while the head or pelvic end of the fetus is located in one of the iliac regions, that is, below the crest of the iliac bone.

Position of the fetus (positio) - the relation of the back of the fetus to the left (first position) or to the right (second position) side of the uterus in the longitudinal lie. With the transverse and oblique lie of the fetus, the position is determined by the relation of the fetal head to the right or left side of the uterus (the first position is the head in the left wall of the uterus, the second - in the right).

View of the fetus (visus) - the ratio of the back of the fetus to the front and back walls of the uterus

1. anterior (front) view - the back of the fetus is turned slightly forward;
2. posterior view - the back of the fetus is turned slightly backwards

Presentation of the fetus (praesentatio) - the relationship of the lowest large part of the fetus to the birth canal (to the entrance to the pelvis). In longitudinal positions, there is either a head (96%) or a pelvic presentation (3.5%).

Examination of a pregnant woman

An objective examination of a pregnant woman begins with a general examination, which is conducted according to generally accepted rules, starting with an assessment of the general condition, temperature measurement, examination of the skin and mucous membranes. Then the cardiovascular, respiratory, digestive, urinary, nervous and endocrine systems are examined. It is necessary to emphasize the obligation to measure blood pressure on both hands, because significant asymmetry is possible during gestosis.

Special obstetric examination consists of external obstetric examination, internal obstetric examination and additional methods.

External obstetric examination includes:

1. Determination of the circumference of the abdomen and the height of the fundus of the uterus.

Abdominal circumference is measured with a centimeter tape at the level of the navel. The height of the uterine fundus is measured from the upper edge of the symphysis to the fundus of the uterus.

The fundus of the uterus is at the level of the symphysis	12 weeks.
In the middle of the distance between the womb and the navel	16 weeks
At the level of the navel	24 weeks
In the middle of the distance between the navel and the xiphoid process	30-32 weeks
It reaches the xiphoid process	36 weeks

When multiplying the size of the abdominal circumference by the standing height of the fundus of the uterus, it is possible to determine the estimated weight of the fetus.

Palpation of the abdomen of pregnant women is carried out sequentially, using four methods of external examination **(Leopold's methods).**

Palpation should be conducted with utmost gentleness. Clumsy and purposeless palpation is not only uninformative but may cause undue uterine irritability. During Braxton-Hicks contraction or uterine contraction in labor, palpation should be suspended.

Fundal grip (First Leopold): The palpation is done facing the patient's face. The whole of the fundal area is palpated using both hands laid flat on it to find out which pole of the fetus is lying in the fundus: (a) broad, soft and irregular mass suggestive of breech, or (b) smooth, hard and globular mass suggestive of head. In transverse lie, neither of the fetal poles are palpated in the fundal area.

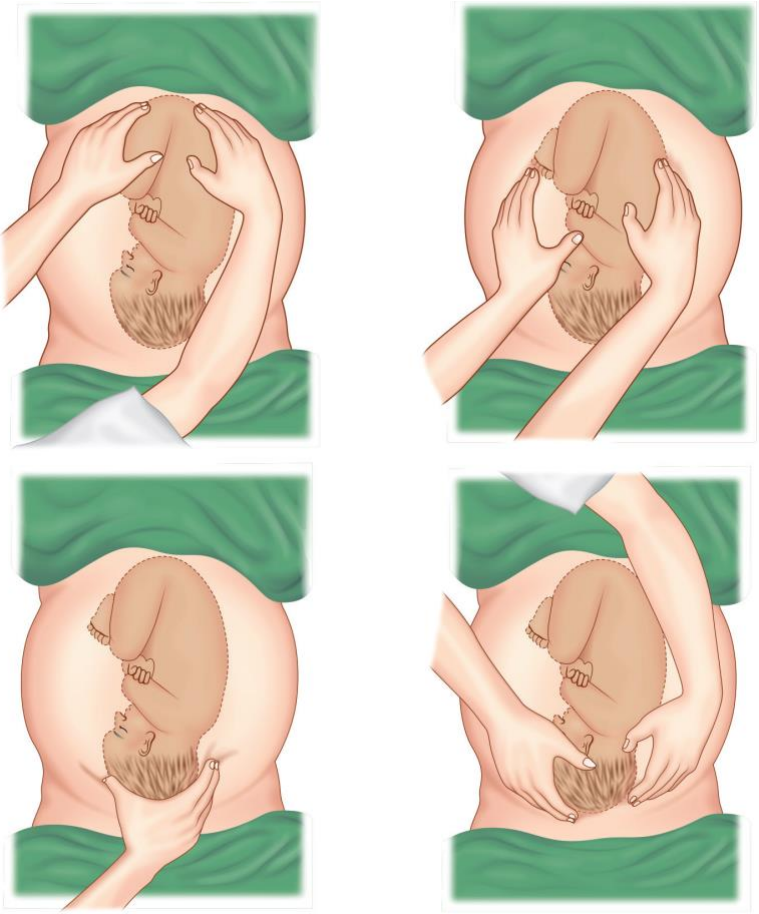
Lateral or umbilical grip (Second Leopold): The palpation is done facing the patient's face. The hands are to be placed flat on either side of the umbilicus to palpate one after the other, the sides and front of the uterus to find out the position of the back, limbs and the anterior shoulder. The back is suggested by smooth curved and resistant feel. The 'limb side' is comparatively empty and there are small knob like irregular parts. After the identification of the back, it is essential to note its position whether placed anteriorly or towards the flank or placed transversely. Similarly, the disposition of the small parts, whether placed to one side or placed anteriorly occupying both the sides, is to be noted. The position of the anterior shoulder is to be sought for. It forms a well marked prominence in the lower part of the uterus above the head. It may be placed near the midline or well away from the midline.

Pawlik's grip (Third Leopold): The examination is done facing towards the patient's face. The overstretched thumb and four fingers of the right hand are placed over the lower pole of the uterus keeping the ulnar border of the palm on the upper border of the symphysis pubis. When the fingers and the thumb are approximated, the presenting part is grasped distinctly (if not engaged) and also the mobility from side to side is tested. In transverse lie, Pawlik's grip is empty.

Pelvic grip (Fourth Leopold): The examination is done facing the patient's feet. Four fingers of both the hands are placed on either side of the midline in the lower pole of the uterus and parallel to the inguinal ligament. The fingers are pressed downwards and backwards in a manner of approximation of finger tips to palpate the part occupying the lower pole of the uterus (presentation). If it is head, the characteristics to note are: (1) precise presenting area (2) attitude and (3) engagement.

To ascertain the presenting part, the greater mass of the head (cephalic prominence) is carefully palpated and its relation to the limbs and back is noted. The attitude of the head is inferred by noting the relative position of the sincipital

and occipital poles. The engagement is ascertained noting the presence or absence of the sincipital and occipital poles or whether there is convergence or divergence of the finger tips during palpation. This pelvic grip using both the hands is favored as it is most comfortable for the woman and gives most information.



External pelviometry.

Assessment of the false pelvis can be done using external calipers.

Time: The assessment is done at any gestational age or at the beginning of labor.

Procedures: The patient should empty the bladder. The examination is done with the patient in dorsal position. To measure external conjugate ask patient to turn to her right side with flexed right thigh and knee and extended left leg.

Steps: Following pelvic measurements should be taken (Fig. 1):

- the interspinous diameter– the distance between antero-superior spines of iliac bones, 25-26 cm,
- the intercristal diameter – the distance between the furthest points of iliac crests, 27-28 cm,
- the intertrochanteric diameter – the distance between the greater trochanters of femoral bone, 30-31 cm
- the external conjugate – the distance between suprasacral fossa beneath the spinous process of L5 and upper edge of symphysis pubis, 20-21 cm

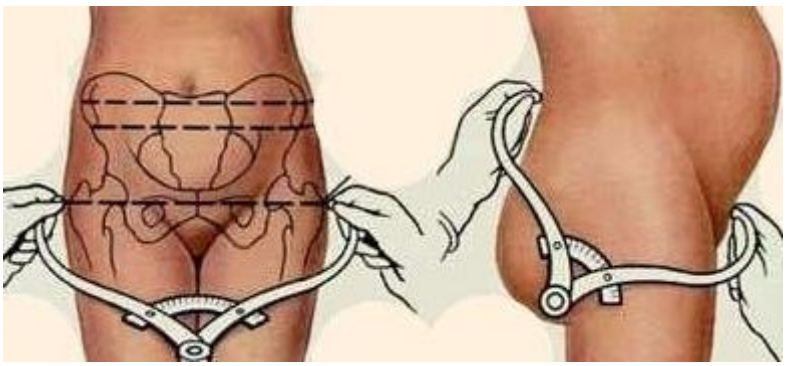


Fig.1: External pelvimetry

3. Auscultation of the fetus.

The heart activity of the fetus is determined with the obstetric stethoscope at the beginning of the second half of pregnancy. The stethoscope is placed in the place where the fetal heartbeat can be most clearly heard, perpendicular to the front abdominal wall. The heartbeat is most clearly heard from the side of the back of the fetus, in the head presentation - below the navel, in the breech presentation - above the navel, on the left - in the first position, on the right - in the second.

The normal range of fetal heart rate is 120-160 beats per minute. Heart tones are double, rhythmic, do not coincide with the pulse of the pregnant woman.

Internal obstetric examination

Vaginal examination of a pregnant woman is mandatory when entering the delivery room, discharge of amniotic fluid, to assess the progress of the opening of the cervix (every 4 hours during physiological labor), out of turn in the case of threatening conditions of labor and the fetus to clarify the obstetric situation.

Measurement of diagonal conjugate

Time: It is measured clinically during pelvic assessment in late pregnancy or in labor.

Procedures: The patient is to empty the bladder and placed in dorsal position.

Steps: Two fingers are introduced into the vagina taking aseptic precautions. The fingers are to follow the anterior sacral curvature. In normal pelvis, it is difficult to feel the sacral promontory or at best can be felt with difficulty. However, in order to reach the promontory, the elbow and the wrist are to be depressed sufficiently while the fingers are mobilized in upward direction. The point at which the bone recedes from the fingers is the sacral promontory. The fingers are then mobilized under the symphysis pubis and a marking is placed over the gloved index finger by the index finger of the left hand.

The internal fingers are removed and the distance between the marking and the tip of the middle finger gives the measurement of diagonal conjugate. For practical purpose, if the middle finger fails to reach the promontory or touches it with difficulty, it is likely that the conjugate is adequate for an average size head to pass through.

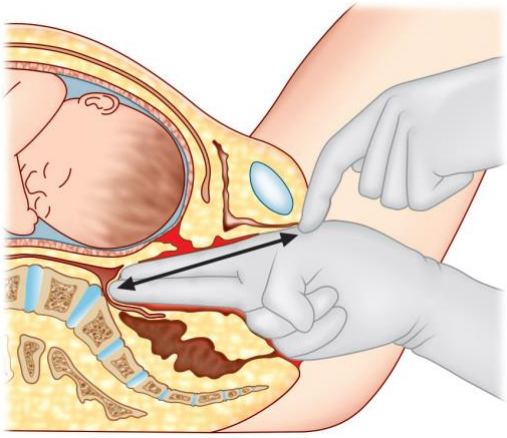


Fig.2: Measurement of diagonal conjugate

Internal pelvimetry

Assessment of the pelvis can be done by bimanual examination.

Time: In vertex presentation, the assessment is done at any time beyond 37th week but better at the beginning of labor. Because of softening of the tissues, assessment can be done effectively during this time.

Procedures: The patient is to empty the bladder. The pelvic examination is done with the patient in dorsal position taking aseptic preparations.

Steps: The internal examination should be gentle, thorough, methodical and purposeful. It should be emphasized that the sterilized gloved fingers once taken out should not be reintroduced.

Sacrum — The sacrum is smooth, well curved and usually inaccessible beyond lower three pieces. The length, breadth and its curvature from above down and side to side are to be noted.

Sacrosciatic notch — The notch is sufficiently wide so that two fingers can be easily placed over the sacrospinous ligament covering the notch. The configuration of the notch denotes the capacity of the posterior segment of the pelvis and the side walls of the lower pelvis.

Ischial spines — Spines are usually smooth (everted) and difficult to palpate. They may be prominent and encroach to the cavity thereby diminishing the available space in the mid pelvis.

Ilio-pectineal lines — To note for any beaking suggestive of narrow fore pelvis (android feature).

Sidewalls — Normally they are not easily palpable by the sweeping fingers unless convergent.

Posterior surface of the symphysis pubis — It normally forms a smooth rounded curve. Presence of angulation or beaking suggests abnormality.

Sacrococcygeal joint — Its mobility and presence of hooked coccyx, if any, are noted.

Pubic arch — Normally, the pubic arch is rounded and should accommodate the palmar aspect of three fingers. Configuration of the arch is more important than pubic angle.

Diagonal conjugate — After the procedure, the fingers are now taken out (see above).

Pubic angle: The inferior pubic rami are defined and in female, the angle roughly corresponds to the fully abducted thumb and index fingers. In narrow angle, it roughly corresponds to the fully abducted middle and index fingers.

Transverse diameter of the outlet (TDO) — It is measured by placing the knuckles of the first interphalangeal joints or knuckles of the clinched fist between the ischial tuberosities.

Anteroposterior diameter of the outlet—The distance between the inferior margin of the symphysis pubis and the skin over the sacrococcygeal joint can be measured either with the method employed for diagonal conjugate or by external calipers.

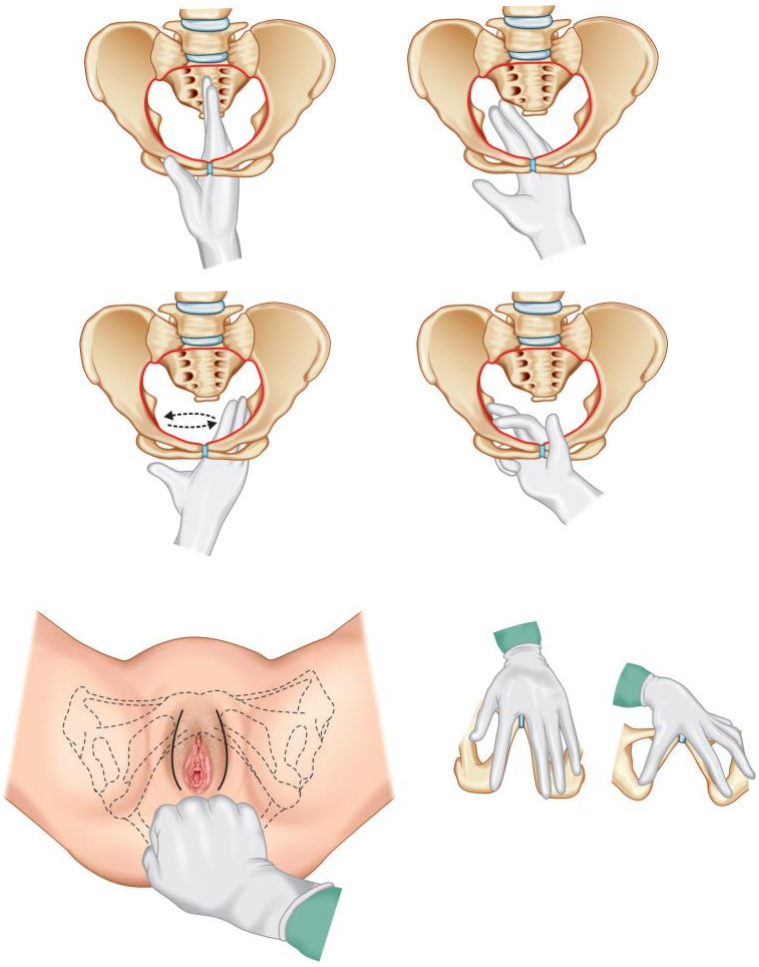


Fig. 3. Internal pelvimetry

Normal (physiological) labor is labor with spontaneous onset and progression of labor in a pregnant woman at 37-42 weeks of pregnancy, occipital presentation of the fetus, with a satisfactory condition of the mother and the newborn after delivery. With the beginning of childbirth, a pregnant woman is called a woman in labor.

Harbingers of childbirth:

1. prolapse of the uterine fundus,

2. increased reaction of the uterus to mechanical stimulation,
3. the exit of the mucous plug from the cervical canal,
4. a decrease in a woman's weight by 1-1.5 kg,
5. decrease in the amount of amniotic fluid,
6. insertion of the head in primiparous women.

The preliminary period is rare, weak cramp-like pains in the lower abdomen and lower back, which occur against the background of normal uterine tone lasting up to 6-8 hours, leading to softening, smoothing and opening of the cervix, shaping of the lower uterine segment, descent anterior part of the fetus.

Determination of the onset of labor.

Cramps are involuntary contractions of the uterine muscles. The intervals between breaks are called pauses.

Regular birth activity - the presence of 1-2 or more contractions of the uterus within 10 minutes, lasting 20 or more seconds, which leads to structural changes in the cervix - its smoothing and opening.

The biological readiness of the body for childbirth is determined by the degree of maturity of the cervix:

Bishop scoring system:

Score	Dilation (cm)	Position of cervix	Effacement (%)	Station (-3 to +3)	Cervical Consistency
0	Closed	Posterior	0-30	-3	Firm
1	1-2	Mid position	40-50	-2	Medium
2	3-4	Anterior	60-70	-1, 0	Soft
3	5-6	--	80	+1, +2	--

0-2 points - "immature" cervix

3-5 points - cervix "not mature enough" > 6 points - cervix "mature"

Clinical course of labor

Labor course is divided into three periods:

The first period is period of opening of the cervix.

The second is expulsion of the fetus.

The third is postnatal.

With the beginning of labor, a pregnant woman is called a woman in labor.

The biomechanism of labor is a complex of translational, rotational, flexion and extension movements that the fetus makes while passing through the birth canal.

The biomechanism of labor in the occipital anterior presentation (OAP) consists of four moments.

The first moment is flexion of the head and lowering it into the plane of the entrance to the small pelvis.

The second point is the internal rotation of the head.

The third point is the extension of the head in the exit plane.

The fourth moment is the internal rotation of the shoulders and the external rotation of the head.

The biomechanism of labor in the occipital posterior presentation (OPP) consists of four moments.

The first moment is flexion of the head and lowering it into the plane of the entrance to the small pelvis.

The second point is the internal rotation of the head.

The third point is additional flexion of the fetal head.

The fourth point is the extension of the head.

The fifth moment is the internal rotation of the shoulders and the external rotation of the head**.**

Regulation of labor activity

The beginning of labor is the result of the gradual integration of the connection of morphological, hormonal, biochemical and biophysical states.

Management labor:

• assessment of the degree of predicted risk of development of maternal and perineal pathology in order to determine the necessary level of care during childbirth;

• determination of the labor plan and mandatory informed agreement with the woman;

• provision of emotional support to the mother during labor (organization of partner births);

• control over the condition of the mother and fetus during labor with partogram management;

• free position of the mother during childbirth;

• labor analgesia according to indications;

• assessment of the condition of the fetus at birth, carrying out the primary toilet of the newborn and early attachment to the mother's breast, implementation of the principles of the "thermal chain".

Preconception care includes:

Termination of harmful effects:

1. Quit smoking.
2. Refusing to drink alcohol.
3. Exclusion of the influence of factors of harmful industrial production.
4. Avoiding psycho-emotional overload and stress.

Women's recovery and treatment of chronic diseases:

1. Normalization of the regime of work and rest.
2. Creating favorable psycho-emotional conditions at work and in the family (everyday life).
3. Rational nutrition.
4. Regular physical activity (morning gymnastics, swimming, walks, etc.).

5. Sanitation of extragenital foci of chronic infection (tonsillitis, sinusitis, pyelonephritis, etc.).
6. Normalization of body weight.
7. Vaccination against rubella of immunonegative women for the prevention of congenital rubella.
8. Vaccination against hepatitis B of women of reproductive age of the risk group, which provides prevention of vertical transmission of infection, reduction of the risk of liver failure and liver cirrhosis in the mother.
9. Preparation of patients with chronic extragenital diseases:

- diabetes mellitus: stable compensation of carbohydrate metabolism for three months before fertilization and the appointment of folic acid 800 mcg per day for 3 months before conception;
- arterial hypertension (maintenance of normotension, switching to antihypertensive drugs, permitted additional use during pregnancy);
- hypothyroidism (correction of L-thyroxine replacement therapy to achieve a euthyroid state);
- epilepsy (switching to anticonvulsants with less negative effect on the fetus, increasing the dose of folic acid to 800 mcg per day 3 months before conception);
- heart defects (radical surgical treatment according to indications);
- diseases that require constant anticoagulant therapy (cancellation of teratogenic coumarin derivatives, heparin prescription)
- other extragenital diseases (surgical treatment, correction of therapy, achieving disease remission).
- detection and treatment of HIV infection.

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

Non-typical situational questions:

1. The concept of "physiological pregnancy"
2. Changes in the endocrine system that occur during pregnancy.
3. Changes in the genitals and mammary glands observed during pregnancy.
4. Doubtful signs of pregnancy and their diagnostic value.
5. Probable signs of pregnancy and their diagnostic value.
6. Early diagnosis of pregnancy.
7. Diagnosis of late pregnancy

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

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1. Summary of results (criteria for evaluating learning results)

Task 1.

Acute fetal hypoxia was diagnosed in a 23-year-old primiparous woman. At 17-18 weeks of pregnancy, she lifted a heavy structure, after which the problems began. The doctor on duty, after the examination, performed the operation of cavity obstetric forceps, manual separation and removal of placenta. Operations were performed without anesthesia. After the birth of the fetus, the woman's condition worsened: pale, pulse 100 bpm, blood pressure 100/60 mmHg. Vaginal discharge is bloody, moderate. Examination of the birth canal revealed a third-degree cervical tear on the left side and a left vaginal wall tear that reaches the fornix. Blood loss 300.0 ml. What combination caused the deterioration of the condition of the woman in labor.

Question:

1. Establish a preliminary diagnosis?
2. The algorithm of managment a woman?
3. Prospects for the treatment of this patient?

Correct answers:

1. Diagnosis: Pregnancy I, 17-18 weeks. Obstetric traumatic shock. Rupture of the cervix of the 3rd stage, rupture of the vagina of the 3rd stage.
2. Provide emergency care with the involvement of specialists in the maternity hospital. Provide information to the chief physician.
3. With timely assistance and use of all medical measures, prospects are favorable.

Test tasks KROK-2

1.A 28-year-old woman in labor was brought to the maternity hospital with painful often contractions. Labor is the first. Pelvis dimensions: 23-25-28-18 cm. Henkel-Wasten's sign is positive. Woman is excited, the abdomen is tense, painful in the lower parts. Contraction ring at the level of the navel, located obliquely. The fetal head is pressed against the entrance to the pelvis. Fetal heartbeat - 140/min. What complication occurred during childbirth?

Provide a preliminary diagnosis:

A. Discoordination of labor activity
B. Threat of uterine rupture
C. Initiated uterine rupture
D. Complete rupture of the uterus
E. Excessive labor activity

2.A 21-year-old pregnant woman came in with complaints of periodic nosebleeds, petechial rashes on the skin. Objectively: the uterus is in normal tone, the position of the fetus is longitudinal, the head of the fetus is mobile above the entrance to the small pelvis. The fetal heartbeat is clear, rhythmic, 140 beats/min. Laboratory data: platelets – 10.0*10^9/l, Hb – 118 g/l, erythrocytes 3.6*10^12/l, plasma coagulation factors unchanged. The diagnosis was established: 1st pregnancy of 37 weeks, thrombocytopenia.

Specify the tactics of managing a pregnant woman

A. Start labor induction, conduct labor conservatively

B. Prolong pregnancy, give birth through natural birth canals with prevention of bleeding

C. Perform a caesarean section closer to the labor date

D. Deliver immediately by caesarean section

E. Perform cesarean section simultaneously with splenectom

Correct answers: 1-B, 2-B

Protocols, standards, regulatory materials:

Medical care standards "Normal pregnancy" and Evidence-based clinical guideline "Normal pregnancy" of Ministry of Health of Ukraine dated 08/09/2022

Evaluation of the independent work of students

The independent and individual work of students involves the independent processing of educational material presented at the ISW, and is carried out in the following forms: studying educational, specialized literature, directive documents, writing essays on the topics of missed classes, etc.

Independent work of students during the ongoing control of mastering the topics of the sections in the corresponding classroom classes. Mastery of topics that are assigned only to independent work is checked during test control.

Evaluating individual tasks of students

In order to increase the arithmetic average of all grades received by the student during the study of the discipline, the grade for individual tasks is awarded to the student only under the condition of their successful completion and defense.

PRACTICAL LESSON NO.2
TOPIC: "PHYSIOLOGY OF LABOR AND THE POSTPARTUM PERIOD".

Aim: Knowledge of the physiology of childbirth begins clinical obstetrics. Careful containment, and, if necessary, the most approximate inheritance of physiological processes during childbirth is a direct and natural way to reduce maternal and perinatal morbidity and mortality. The study of the main stages of the course and management of physiological childbirth allows you to master in practice the most important methods of examining women in labor, the ability to assess the obstetric situation, and the provision of appropriate assistance in physiological childbirth, taking into account the data, based on the principles of evidence-based medicine. An important component of this lesson is the study of the doctor's tactics in the management of childbirth at all stages, elimination of birth traumatism, prevention of fetal distress and newborn asphyxia. Also students should gain basic knowledge about physiological changes in postpartum period, physiology of lactation and breastfeeding, primary care of newborn in order to make recommendations for management of puerperium and neonatal period and advice woman on discharge.

Basic concepts: To acquaint with the demographic indicators of fertility in different regions of Ukraine. Have an idea of modern perinatal technologies. To master the signs and concepts of childbirth, the main options for the use of pain relief during childbirth, and at what rates they are used. Retrogressive changes in reproductive system and general physiological changes in female body. Course and management of the postpartum period. Physiology of lactation. Breastfeeding. Postpartum contraception: the method of lactation amenorrhea (MLA). Physical features of the newborn. Newborn care. Advantages of cohabitation of mother and child.

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).**

Applicants of higher education must treat a pregnant woman with responsibility and consistency in work, sensitivity and tolerance. Teach the rules of professional examination, external obstetric examination, auscultation of fetal heartbeat. Monitoring of the general internal obstetric examination (on a phantom), determination of the onset of labor. Determine the degree of maturity of the cervix according to the Bishop scale. Determine the beginning of the first period of labor, objectively assess the nature of labor (dynamics of the opening of the cervix, frequency, strength and duration of contractions), determine and evaluate the heartbeat of the fetus (by auscultation, CTG); provide assistance during childbirth and provide psychophysiological analgesia for childbirth. Demonstrate the tactics of managing the III period of labor (on a phantom). Be able to assess the integrity of placenta; determine the total blood loss during childbirth; evaluate the condition of the newborn according to the Apgar scale.

To teach the student responsibility and consistency in work, sensitivity and tolerant attitude towards a pregnant woman.

To teach the student logical clinical thinking and diagnostic methods new to him.

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

- Requirements for the theoretical readiness of students of higher education to perform practical classes.

Knowledge requirements:

- the ability to collect medical information about the patient and analyze clinical data;
- the ability to interpret the results of laboratory and instrumental achievements;
- ability to diagnose: determine preliminary, clinical, final, accompanying diagnosis, emergency conditions;
- the ability to perform medical and dental manipulations;
- ability to determine tactics, methods and provision of emergency medical assistance;
- the ability to provide pre-medical care according to the protocols of tactical medicine.

List of didactic units:

-have an understanding of what the term Physiological labor means;

- have an understanding of what the term physiological postpartum period means;
- determine the amount of necessary laboratory research and specialist consultations;
- collect anamnesis, conduct a general examination and obstetric examination of the pregnant woman.

Questions (tests, tasks, clinical situations) to check the basic level of knowledge on the subject of the lesson.

Questions:

Define the concept of " Harbingers of labor" and "preliminary period".

• What are the different birth periods?

• What are the features of the mechanism of opening the cervix in prima – and multipara women?

• What are the phases in the first period of labor?

• What are the features of the II stage of labor?

• How is the degree of opening of the cervix determined?

• What are the indications for an internal obstetric examination?

• What objective information must be obtained during a vaginal examination in the first period of labor?

• How is premature, early, timely and late discharge of amniotic fluid determined?

• What characterizes the II period of labor, its maximum permissible duration?

• What are the features of the II stage of labor

• What characterizes the III period of labor, its duration?

• What does the Apgar score mean for a newborn?

• What criteria does the thermal chain include?

Situational test tasks:

1. A 32-year-old pregnant woman was hospitalized in the maternity ward at 37-38 weeks of gestation with complaints of contractions in the lower abdomen that started 4 h ago, water was broken 2 h ago. According to the anamnesis, the first pregnancy, 10 years ago, ended with the birth of a large fetus (weight 4200 g). The condition of the woman is satisfactory. Body weight 72 kg, height 160 cm, blood pressure 115/60 mm Hg on both hands. The dimensions of the pelvis are 26-28-30-21. The position of the fetus is longitudinal, the head is in the pelvic cavity. Contractions after 2-3 minutes for 40-45 seconds, the fetal heartbeat is clear, rhythmic up to 140 bpm.

Internal obstetric examination: full opening of the cervix. The fetal head is on the pelvic floor. Sagical suture is in direct size. A small fountanel under the pubic symphysis.

Question:

1. Establish the diagnosis.
2. What are the patient management tactics?
3. Specify the biomechanism of labor in the occipital anterior presentation

Answer:

Diagnosis: Pregnancy II, 37-38 weeks. The position of the fetus is longitudinal lie, head presentation.

2. The tactics of the patient's management are physiological, without any intervention.

3. Biomechanism of labor in the occipital anterior presentation.

The first moment is flexion of the head and descending it into the plane of the entrance to the small pelvis.

The second point is the internal rotation of the head; it is carried out during its transition from the wide to the narrow part of the pelvis.

The third point is the extension of the head in the exit plane. The sagical suture coincides with the direct size of the pelvic outlet. The fixation point is formed between the middle of the lower edge of the pubic arch and the suboccipital fossa.

The fourth moment is the internal rotation of the shoulders and the external rotation of the head.

2. Pregnant, with a gestation period of 38 weeks, is in the obstetrics department for 10 hours. The position of the fetus is longitudinal, occipital anterior left (1 position) presentation. The amniotic sac was broken 5 hours ago, after which labor activity weakened. Contractions are short, after 5 minutes, the fetal head does not descend. Medical history: 4 pregnancies, the previous 3 deliveries were uncomplicated. Objectively: pulse 80 beats per minute, blood pressure 120/70 mm Hg. The dimensions of the pelvis: 26-28-30-21 cm. Abdomen circumference - 104 cm, SFH - 37 cm. The heartbeat of the fetus is 120 beats per minute, clear. During the internal obstetric examination: the opening of the uterine cavity is complete, the amniotic sac is absent, the fetal head is in the plane of the exit from the pelvis, the sagical suture is straight, the small fontanel is under the pubis.

Question:

1. Establish the diagnosis.

2. What are the patient management tactics?

3. Specify the steps of the thermal chain**.**

Answer:

1. Diagnosis: Pregnancy IV, 38 weeks. Longitudinal lie, occipital anterior presentation, I position. Labor IV. In term, second period of labor, secondary uterine inertia.

2. Physiological labor.

Ten steps of the thermal chain:

1) Warm delivery room (operating room).
2) Immediate drying of the child
3) Skin-to-skin contact
4) Breastfeeding.
5) Postpone weighing and bathing.
6) Properly dress and wrap the child.
7) Round-the-clock cohabitation of mother and child.
8) Transportation in warm conditions.
9) Resuscitation in warm conditions.
10) Increasing the level of training and knowledge

Typical test tasks:

1. One of the planes of the pelvis is bounded behind by the sacral promontory, in front by the crests of the iliac bones and the upper edge of the pubic joint, and laterally by the lin. terminalis. What moment of the biomechanism of labor does the fetus in this plane of the small pelvis?

A. Does not do any of the points.

B. External rotation of the head and internal rotation of the shoulders.

C. Extension of the head.

D. Flexion of the head.

2. The baby's head has a dolichocephalic shape, elongated from front to back. On the occipital region, a birth tumor is determined, located in the middle of the distance between the large and small fontanel. In which presentation of the fetal head did the described birth take place?

A. Forehead

B. Occipital anterior presentation.
C. Face presentation.
D. Occipital posterior presentation.

3. A woman giving birth for the second time is in labor for 8 hours. Clear amniotic fluid spilled out. The position of the fetus is longitudinal, the head of the fetus above the entrance to the pelvis is not determined. The fetal heartbeat is clear, rhythmic, 140 per minute, over the pubic symphysis. Internal obstetric examination: the cervix is smoothed, the opening is complete, the fetal bladder is absent. The sacral cavity is completely filled with the head. Ischial spines are not defined. Sagittal suture in the direct size of the pelvis. A large fontanel near the pubic symphysis. Woman is pushing. What period of labor is described?

A.I period.

B. The end of the first period.

S. The beginning of the second period of labor.

D. The end of the second period of labor.

4. The primipara gave a birth to a live boy weighing 3,200 g and 50 cm long. The umbilical cord was cut after the pulsation of the vessels stopped. When pressing with the edge of the palm above the pubic symphysis, the umbilical cord is pulled into the vagina. Is the sign used to determine separation of the placenta?

A. Alfeld.

V. Küstner-Chukalov.

S. Schroeder.

D. Dovzhenko.

Correct answers: 1-D; 2-D; 3-C; 4-B.

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

- Content of the task (assignment, clinical situations, etc.)

Interactive task

Students of higher education in the group are divided into 3 subgroups of 4-5 people each. We work in classes with fantomes and pregnant patients, we give tasks:

Subgroup I - perform external pelviometry.

Subgroup II - measure the Solovyov index, the Michaelis rhombus.

Subgroup III - to estimate the size of the pelvis, to establish the size of the true conjugate.

Non-typical situational tasks

1. In what size of the plane of the entrance to the small pelvis is the sagittal suture in the occipital anterior presentation, I position after performing head flexion?

A. Direct

B. Left oblique or direct.

C. Right oblique or direct.

D. Right oblique or transverse.

2. In what plane of the small pelvis does the internal rotation of the fetal head end in the occipital anterior presentation, II position?

A. Entrance to the small pelvis.

B. Wide part of the pelvic cavity.

C. A narrow part of the pelvic cavity.

D. Exit from the pelvis.

3 In what size of the plane of exit from the pelvis is the shoulders of the fetus pass through and born in the occipital anterior presentation?

A. Direct

B. Right oblique.

C. Left oblique.

D. Transverse.

4. 20 years old primapara is at the beginning of the first period of physiological labor. Contractions last 15-20 seconds every 10-15 minutes, weak. The heartbeat of the fetus is normal. At what opening of the cervix (indicate in cm) did the amniotic fluid broke, which will be timely?

A. 6-8.

B. 8-10.

C. 4-6.

D. 2-4.

5. A woman gives birth for the second time, weighing 80 kg. Specify the allowable blood loss in ml:

A. 400.
B. 500.
C. 600.
D. 700.

Correct answers: 1-D, 2-D, 3-A, 4-B, 5-A

Recommendations (instructions) for the performance of tasks (professional algorithms, reference maps for the formation of practical skills and abilities, etc.)

Methods of examination of women in labor

Algorithm for assessing the degree of cervical dilatation.

External methods to assess the degree of cervical dilatation is possible only approximately. Roughly the degree of cervical dilatation in labor is judged by the height of the contraction ring (the border between the empty muscle, which is contracting, and the lower segment of the uterus, which is stretched). During childbirth, the cervix is usually opened as much as the contraction ring of the transverse fingers is located above the pubic arch.

Internal method for assessing the degree of dilatation of the cervix.

In order to determine the dynamics of cervical dilatation and the location of the fetal head during childbirth, an internal obstetric study is carried out, which is performed when a woman enters the maternity ward, every 4:00 during the first stage of labor and after the discharge of amniotic fluid (for the timely diagnosis of possible loss with the flow amniotic fluid of the umbilical cord and small parts of the fetus).

Due to the increased risk of ascending infection of the birth canal, additional internal obstetric studies in the first stage of labor are permissible only according to indications: abnormal heart rate of the fetus to find out the reasons for the violation of its condition (for example, prolapse of the umbilical cord) and resolve the issue of the method of delivery (cesarean section, Vacuum- extraction, obstetric forceps) in case of multiple pregnancy, after the birth of the first fetus, incorrect position of the fetus, or suspicion of insertion of the fetal head at the entrance to the small pelvis in a state of extension; delay in labor progress due to ineffective uterine contractions (for amniotomy and before oxytocin stimulation) the need for prompt vaginal delivery; bleeding after 22 weeks of pregnancy (in the operating room).

The degree of lowering of the fetal head can also be determined by external and internal methods.

Determination of the degree of lowering of the head by external methods.

The degree of lowering of the head relative to the plane of the entrance to the small pelvis can be determined using the IV Leopold's technique.

The recommended method of abdominal palpation, which determines the height of the fetal head by the number of diameters of the fingers above the symphysis:

5/5 - the fetal head is located above the symphysis, 5 fingers wide, the fetal head is located above the entrance to the small pelvis;

4/5 - the width of 4 fingers, the head is pressed against the entrance to the small pelvis;

3/5 - the width of 3 fingers, the head is a small segment at the entrance to the small pelvis;

2/5 - the width of 2 fingers, the head is a large segment at the entrance to the small pelvis;

1/5 - 0/5 - the width of 1 finger or the head is not determined, the head is in the pelvic cavity.

External palpation of the head should be performed immediately prior to internal obstetric examination. This makes it possible to avoid errors in determining the position of the head in the event of the formation of a large edema of the presenting part of the fetal head.

Determination of the degree of lowering of the head by the method of internal obstetric examination.

• The head is above the entrance to the small pelvis. The pelvis is free, the head is high, it does not interfere with palpation of the nameless line of the pelvis, cape; the sagittal suture is in the transverse dimension at the same distance from the symphysis and the cape, the large and small crown are at the same level.

• The head is a small segment at the entrance to the pelvis. The sacral cavity is free, you can approach the promontory with a bent finger (if reachable). The inner surface of the symphysis is accessible for research, the small fontanel is lower than the large one. The sagittal suture is slightly oblique.

• The head is a large segment at the entrance to the pelvis. The head occupies the upper third of the symphysis and sacrum. The promontory is inaccessible, the gluteal spines are palpable easily. The head is bent, the small fontanel is lower than the large one, the sagittal suture is in one of the oblique dimensions.

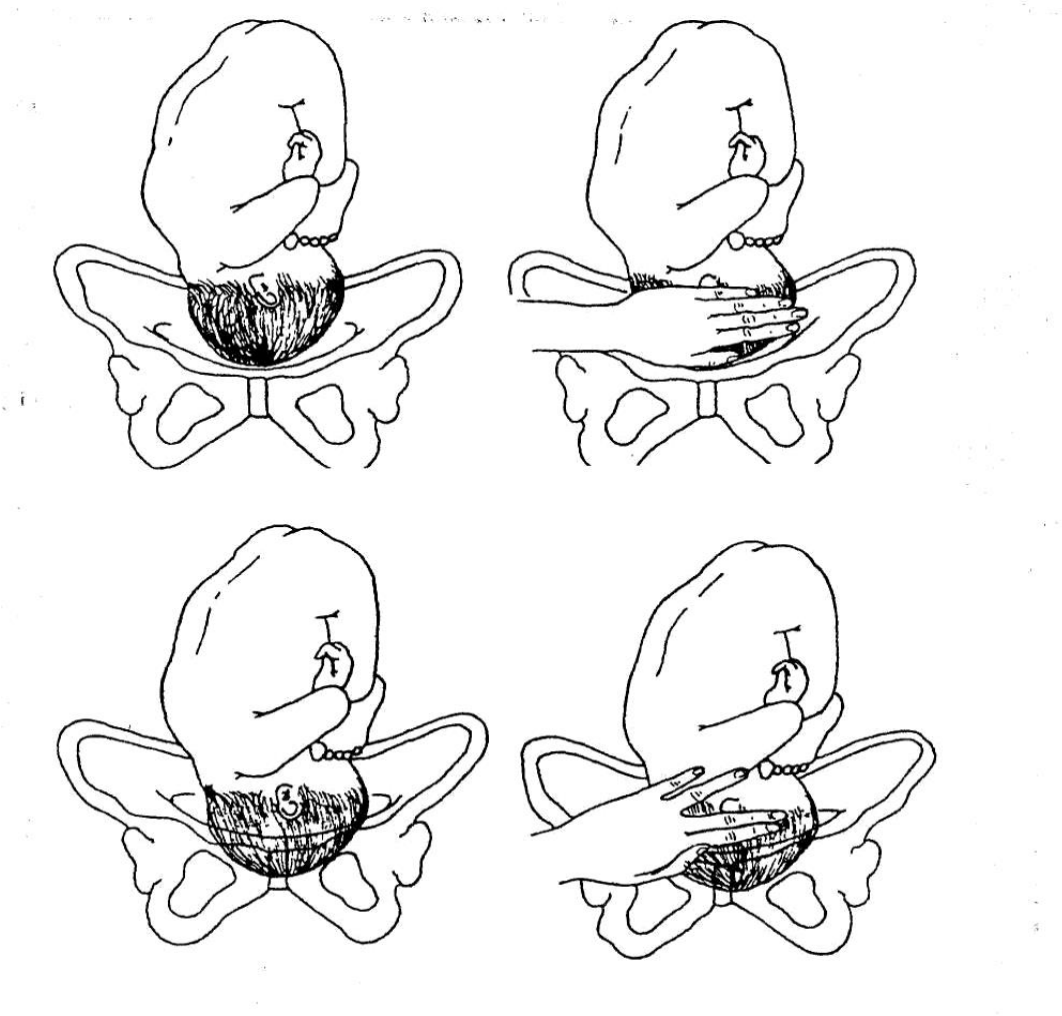
• The head is in the wide part of the small pelvis. The head itself passed in a circle the plane of the wide part of the small pelvis. Two-thirds of the inner surface of the pubic articulation and the upper half of the sacral cavity are occupied by the head. IV and V sacral vertebrae and gluteal spines are freely palpable. The sagittal suture is located in one of the oblique sizes, the small fontanel is lower than the large one.

• The head is in the narrow part of the small pelvis. The upper two thirds of the sacral cavity and the entire inner surface of the pubic articulation are occupied by the head. The gluteal spines are difficult to reach. The head is close to the bottom of the pelvis, its internal rotation is not yet complete, the sagittal suture is in one of the oblique dimensions, close to the straight one. The small fontanelle at the bosom is lower than the large one.

• The head is at the outlet of the pelvis. The sacral cavity is completely filled with the head, the gluteal spines are not defined, the sagittal suture is located in the straight size of the exit from the small pelvis. The small fontanelle at the bosom is lower than the large one.

The position of the fetal head during internal examination can also be found in relation to the level of the gluteal spines - linia interspinalis (position "0"). The distance from the gluteal spines to the plane of the entrance to the small pelvis is the same as from the spines to the plane of the exit from the pelvis. The "-" sign means that the head is above the gluteal spines (closer to the entrance to the small pelvis). The "+" sign means that

Stations of the fetal head



There are 3 grades of cervical state: immature, not fully mature and mature cervix. Bishop Scoring System

Factor		Points		
		0	**1**	**2**
1.	**Position of cervix**	Directed toward the symphysis	Middle	The pelvic axis

2.	**Length of cervix (cm)**	> 2 cm	1-2 cm	< 1 cm
3.	**Consistency of cervix**	Dense	Mederate	Soft
4.	**Cervical dilatation (cm)**	close	1-2	> 2
5.	**Station of presenting part**	above the pelvic inlet plane	Between the superior and posterior margin of the symphysis	posterior margin of the symphysis and below.

0-2 points – «immature» cervix;

3-5 points – «not fully mature» cervix;

> 6 points – «mature» cervix.

Cervical Examination

The level - or station - of the presenting fetal part in the birth canal is described in relationship to the ischial spines, which are halfway between the pelvic inlet and the pelvic outlet. When the lowermost portion of the presenting fetal part is at the level of the spines, it is designated as being at zero (0) station. In the past, the long axis of the birth canal above and below the ischial spines was arbitrarily divided into thirds by some and into fifths (approximately 1 cm) by other groups. Adopted the classification of station that divides the pelvis above and below the spines into fifths. Each fifth represents a centimeter above or below the spines. Thus, as the presenting fetal part descends from the inlet toward the ischial spines, the designation is –5, –4, –3, –2, –1, then 0 station. Below the spines, as the presenting fetal part descends, it passes +1, +2, +3, +4, and +5 stations to delivery. Station +5 cm corresponds to the fetal head being visible at the introitus.

If the leading part of the fetal head is at 0 station or below, most often the fetal head has engaged - thus, the biparietal plane has passed through the pelvic inlet. If the head is unusually molded or if there is an extensive caput formation or both, engagement might not have taken place although the head appears to be at 0 station (linea interspinalis).

- mark "-" head is above the linea interspinalis (near the pelvic plane of inlet).
- mark "+" the fetal head is below the linea interspinalis (near the pelvic outlet).

Position of the fetal head in the pelvic plane:

-3 - head of the fetus above the inlet;

-2 - head of the fetus pressed to the inlet;

-1 - head of the fetus by the minor segment in the inlet;

-0 - head of the fetus by the major segment in the inlet;

+1 - head of the fetus in the wide part of the small pelvis;

+2 - head of the fetus in the narrow part of the small pelvis;

+3 - head of the fetus in the pelvic outlet

MANAGEMENT:

A vaginal examination is performed 4 hours after the initial one or earlier if clinically warranted. If subsequent examination shows dilatation between Alert line and Action line a repeat vaginal examination is carried out in 2 hours. At this examination if the cervical dilatation is touching / crossing the Action line, the Labour and Birth Suite medical team must evaluate the woman's progress in labour and instigate appropriate intervention.

Auscultation of the fetal heart tones is performed after 20 weeks of pregnancy with the help of obstetrical stethoscope, where the frequency of heart beats in one minute is determined.

- physiological normal - 110-170 bpm
- frequency of heart beats above 180 bpm and less than 100 bpm testifies of disorders in the fetal condition.

For auscultation of fetal heart beat use the following rules:

- for facial presentation – listen for the heart beat below the navel on the side where the fetal thorax is located (if first position - on the right side, if second - on the left side).
- for transverse lie - near the navel, closer to the fetal head.
- for breech presentation - above the navel, near the fetal head on the side where the back is turned.

Cardiotocography (CTG) - synchronous electronic monitoring of the fetal heart rate and uterine contractions for 10-15 minutes.

- during analysis of the CTG, such parameters are evaluated: basal frequency of heart rate (BFHR), variability of the heart rate (amplitude and frequency oscillation), presence and type of changes in BFHR in the form of acceleration or decelerations of heart rate.
- if any pathological parameters of heart rate are present, which testify of a dangerous fetal condition, continuous monitoring with the CTG during labour is recommended

• diagnostic criteria: during normal fetal condition for CTG it is characteristic: BFHR is between 110-170 b.p.m (normocardia), variability (width of the tape) - 10-25 bpm with frequency of oscillation 3-6 cycles per minute (wavy type), presence of accelerations and absence of decelerations.

Possible rupture of membranes. In 10% of pregnancies, rupture of the membranes precedes the onset of labour. This presents as fluid leaking through the cervix and out of the vagina. The differential diagnosis includes urine leakage, vaginal infections, and passage of cervical mucus. Because prolonged rupture of the membranes is associated with higher rates of maternal and neonatal infection, optimal treatment of ruptured membranes at term is prompt induction of labour.

Monitoring the condition of women:

- heart rate and blood pressure (every 2 hours)
- temperature (every 4 hours)
- urine: volume; presence of protein or acetone - for displays (every 4 hours).

Management of the second stage of labour:

• measurement blood pressure, heart rate in women during labour every 10 minutes;

• monitoring of fetal palpitation every 5 minutes during the early phase;

• control by promoting fetal head through the birth canal;

• perform amniotomy if there is no timely rupture of membrane.

Physiologic position and movement.

Management of the third stage of labour

Two tactics for conducting the third period of delivery exist: ***active and conservative.***

Immediately following delivery of the baby, the uterus begins the process of involution. Uterine contractions cause shearing of the placenta away from the uterine wall, and the placenta generally delivers shortly after the baby. Signs of spontaneous placental separation include an apparent lengthening of the umbilical cord, a gush of vaginal bleeding, and a change in shape of the uterus from discoid to globular.

Active management of the third stage of labour has been shown to be of benefit in reducing postpartum blood loss and may include draining the placenta of blood, controlled cord traction, or administration of oxytocic agents. If cord traction is employed, suprapubic pressure with the abdominal hand will lessen the potential for uterine inversion and catastrophic hemorrhage and shock. If the placenta has not delivered within 30 minutes of childbirth, or in the case of severe hemorrhage, the placenta should be manually removed.

The placenta should always be carefully inspected for abnormalities of cord insertion, confirmation of a three-vessel cord, and completeness of removal of the placenta and membranes. If any portion of the placenta or the membranes is missing,

the uterine cavity should be manually explored. The uterus should be frequently palpated following delivery of the placenta to ensure that it remains well contracted. Oxytocin, administered as a dilute intravenous solution or given 10 to 20 U intramuscularly, decreases the incidence of postpartum hemorrhage due to uterine atony. The birth canal, including the cervix, vagina, and perineum, should be inspected for lacerations requiring repair. Under most circumstances, the baby can remain with the mother or immediate family and attempts at breast-feeding within the first 10 to 20 minutes should be encouraged. This first suckling stimulates endogenous oxytocin release and begins the process of milk production and successful breast-feeding.

Episiotomy is an incision in the perineum made to facilitate vaginal delivery. There is no role for routine episiotomy in modern obstetric practice, although there are some clinical indications for its use. In general, episiotomy is used to shorten the second stage of labour for fetal indications (terminal bradycardia or shoulder dystocia) or to control perineal damage when the risk of significant spontaneous laceration is high (operative vaginal delivery, previous large laceration, small perineal body, or large infant). Episiotomy should be performed with adequate local or regional anesthesia and with the verbal consent of the patient, when possible. There are two types of episiotomy techniques in common use: median and mediolateral.

Active conduction of the third stage

Because of a number of advantages, active conduction of the third stage of labour is the most widespread tactic and approved by the World Health Organization, International Federation of Obstetricians-Gynecologists and the International Confederation of Obstetricians.

The use of active conduction of the third stage during each labour lowers the frequency of postnatal bleeding 60% of the time caused by atonia of the uterus, and it also reduces the amount of postnatal blood loss and need for haemotransfusion.

Standard components for active conduction of the third stage include:

• introduction of uterotonics:

• birth of the placenta by controlled traction of the umbilical cord while holding the fundus of the uterus with the palm of the doctor’s hand;

• massage of the uterus through anterior abdominal wall after the birth of the placenta.

Rules for introducing uterotonics: within the first minute after the birth of the child palpate the uterus for the presence of a second child, if there is no other child

– introduce 10 units of oxytocin i\m. Oxytocin is the most widespread uterotonic because it takes effect in 2-3 minutes; it can be used for all women.

If oxytocin can not be used, use ergometrin - 0,2 mg i/m. The woman should be informed about the possible side-effects of these preparations.

Ergometrin cannot be used in women with pre-eclampsia, eclampsia and hypertension.

Controlled traction by the umbilical cord:

• clamp the umbilical cord closer to the perineum; hold the clamped umbilical cord and clamp in one hand;

• put the second hand directly over the women's pubis and hold the uterus, pulling away from the symphysis;

• slightly pull the umbilical cord and wait for a strong contraction of the uterus (usually 2-3 minutes after the introduction of oxytocin);

• simultaneously during the strong contraction, the woman should push and very cautiously pull (traction) the umbilical cord downward till the birth of the placenta; simultaneously continue with the second hand contraction in the opposite direction of traction (pushing the uterus away from the symphysis).

• if the placenta does not detach during 30-40 seconds of controlled traction, stop the traction by the umbilical cord, but continue cautiously keeping the cord in light tension; the second hand remains over the pubis, holding the uterus.

• wait for the uterus to contract again and repeat the controlled traction by the umbilical cord with contraction of the uterus.

Never use traction (pulling downwards) by the umbilical cord without contraction <u>of a well contracted</u> uterus over the pubis.

Using traction by the umbilical cord without contraction of the uterus can lead to prolapse or inversion of the uterus.

After the placenta is delivered, hold it with both hands and cautiously turn it, pulling the membranes out. If the membranes tear, cautiously examine the vagina and cervix in sterile gloves. If the membranes are seen, carefully use a clamp to remove it.

Attentively examine the placenta and make certain of its integrity. If an area of the maternal surface is absent, or if there is an area torn with vessels, there is reason to suspect retention of an area of the placenta and begin necessary measures.

Massage of the uterus: after the birth of the placenta immediately massage the uterus through the anterior abdominal wall until the uterus does not become firm.

Further, the uterus should be palpated every 15 minutes for the first 2 hours, to be sure that after the uterus is massaged it does not relax, but remains firm. If necessary repeat the massage.

Ice is not applied on the lower abdomen during the early postnatal period.

Active conduction of the III stage of labour should be offered to each woman as it lowers the frequency of postnatal bleedings resulting from atonia of the uterus. The parturient woman should be informed concerning active conduction of the III stage of labour, and should give voluntary written consent.

Passive conduction of the third stage of labour

The postnatal period of labour is the shortest (5 - 30 min). However, very important because of the possibility of appearing of postnatal bleeding. The postnatal period is accompanied by physiological blood loss (0,5 % of the woman's weight).

The midwife, when the umbilical cord stops pulsating, but no later than one minute after the birth of the child, clamps and cuts the umbilical cord. The general condition of the woman is carefully supervised; signs of placental detachment, amount of blood loss are closely watched.

When signs of placental detachment occur (Schreder's sign, Alfred's, Klein's, Kustner-Chukalov's) - it is necessary to have the woman "push" which leads to the birth of the afterbirth.

If there are no signs of placental detachment or signs of external bleeding 30 minutes after the delivery of the baby, manual detachment and delivery of the afterbirth is performed. If there are signs of bleeding - manual detachment and delivery of the afterbirth should be performed immediately with adequate anesthesia.

After the placenta is delivered, it should be carefully examined (be certain of the integrity of the placenta and membranes).

The general duration of birth on average for primipara is 8-12 hours, for secundipara - 6-8 hours.

The birth canal is examined after the delivery (with the help of vaginal mirrors) only if there is excessive bleeding, after operative vaginal delivery or if the doctor is uncertain about the integrity of the birth canal (fast childbirth, childbirth outside the hospital).

PUERPERIUM is the period following childbirth during which the body tissues, specially the pelvic organs revert back approximately to the prepregnant state both anatomically and physiologically. The retrogressive changes are mostly confined to the reproductive organs with the exception of the mammary glands which in fact show features of activity. Involution is the process whereby the genital organs revert

back approximately to the state as they were before pregnancy. The woman is termed as a puerpera.

Puerperium begins as soon as the placenta is expelled and lasts for approximately 6 weeks when the uterus becomes regressed almost to the non-pregnant size. The period is arbitrarily divided into — (a) early – within 24 hours; (b) remote – up to 6 weeks. It is the time from delivery until complete physiological involution and psychological adjustment.

INVOLUTION OF THE UTERUS

Uterus: Immediately following delivery, the uterus becomes firm and retract with alternate hardening and softening. The uterus measures about 20 × 12 × 7.5 cm (length, breadth and thickness) and weighs about 1000 gm. At the end of 6 weeks, its measurement is almost similar to that of the non-pregnant state and weighs about 60 gm. The placental site contracts rapidly presenting a raised surface with measures about 7.5 cm and remains elevated even at 6 weeks when it measures about 1.5 cm.

Lower uterine segment: Immediately following delivery, the lower segment becomes a thin, flabby and collapsed structure. It takes a few weeks to revert back to the normal shape and size of the isthmus, i.e. the part between the body of the uterus and internal os of the cervix.

Cervix: The cervix contracts slowly; the external os admits two fingers for a few days but by the end of first week, narrows down to admit the tip of a finger only. The contour of the cervix takes a longer time to regain (6 weeks) and the external os never reverts back to the nulliparous state.

The physiological process of involution is most marked in the body of the uterus. Changes occur in the following components: (1) Muscles (2) Blood vessels (3) Endometrium.

Muscles: There is marked hypertrophy and hyperplasia of muscle fibers during pregnancy and the individual muscle fiber enlarges to the extent of 10 times in length and 5 times in breadth. During puerperium, the number of muscle fibers is not decreased but there is substantial reduction of the myometrial cell size. Withdrawal of the steroid hormones, estrogen and progesterone, may lead to increase in the activity of the uterine collagenase and the release of proteolytic enzyme. Autolysis of the protoplasm occurs by the proteolytic enzyme with liberation of peptones which enter the blood stream. The connective tissues also undergo the same type of degeneration. The conditions which favors involution are — (a) efficacy of the enzymatic action and (b) relative anoxia induced by effective contraction and retraction of the uterus.

Blood vessels: The changes of the blood vessels are pronounced at the placental site. The arteries are constricted by contraction of its wall and thickening of the intima followed by thrombosis. During the first week, the arteries undergo thrombosis, hyalinization and fibrinoid end arteritis. The veins are obliterated by thrombosis, hyalinization and endophlebitis. New blood vessels grow inside the thrombi.

Endometrium: Following delivery, the major part of the decidua is cast off with the expulsion of the placenta and the membranes, more at the placental site.

The endometrium left behind varies in thickness from 2–5 mm. The superficial part containing the degenerated decidua, blood cells and bits of fetal membranes becomes necrotic and is cast off in the lochia. Regeneration starts by 7th day. It occurs from the epithelium of the uterine gland mouths and interglandular stromal cells. Regeneration of the epithelium is completed by 10th day and the entire endometrium is restored by the day 16, except at the placental site where it takes about 6 weeks.

CLINICAL ASSESSMENT OF INVOLUTION

The rate of involution of the uterus can be assessed clinically by noting the height of the fundus of the uterus in relation to the symphysis pubis. The measurement should be taken carefully at a fixed time every day, preferably by the same observer. Bladder must be emptied before hand and preferably the bowel too, as the full bladder and the loaded bowel may raise the level of the fundus of the uterus. The uterus is to be centralized and with a measuring tape, the fundal height is measured above the symphysis pubis. Following delivery, the fundus lies about 13-14 cm above the symphysis pubis. During the first 24 hours, the level remains constant; thereafter, there is a steady decrease in height by 1,5-2 cm in 24 hours, so that by the end of second week the uterus becomes a pelvic organ. The rate of involution thereafter slows down until by 6 weeks, the uterus becomes almost normal in size.

The involution may be affected adversely and is called subinvolution. Sometimes, the involution may be continued in women who are lactating so that the uterus may be smaller in size — superinvolution. The uterus, however, returns to normal size if the lactation is withheld.

INVOLUTION OF OTHER PELVIC STRUCTURES

Vagina: The distensible vagina, noticed soon after birth takes a long time (4-8 weeks) to involute. It regains its tone but never to the virginal state. The mucosa remains delicate for the first few weeks and submucous venous congestion persists even longer. It is the reason to withhold surgery on puerperal vagina. Rugae partially reappear at third week but never to the same degree as in prepregnant state. The introitus remains permanently larger than the virginal state. Hymen is lacerated and is represented by nodular tags — the carunculae myrtiformes.

Broad ligaments and round ligaments require considerable time to recover from the stretching and laxation.

Pelvic floor and pelvic fascia take a long time to involute from the stretching effect during parturition.

LOCHIA

It is the vaginal discharge for the first fortnight during puerperium. The discharge originates from the uterine body, cervix and vagina.

Odor and reaction: It has got a peculiar offensive fishy smell. Its reaction is alkaline tending to become acid towards the end.

Color: Depending upon the variation of the color of the discharge, it is named as: (1) Lochia rubra (red) 1-4 days. (2) Lochia serosa (5-9 days) — the color is yellowish or pink or pale brownish. (3) Lochia alba — (pale white) — 10-15 days.

Composition: Lochia rubra consists of blood, shreds of fetal membranes and decidua, vernix caseosa, lanugo and meconium. Lochia serosa consists of less RBC but more leukocytes, wound exudate, mucus from the cervix and microorganisms (anaerobic streptococci and staphylococci). The presence of bacteria is not pathognomonic unless associated with clinical signs of sepsis. Lochia alba contains plenty of decidual cells, leukocytes, mucus, cholesterol crystals, fatty and granular epithelial cells and microorganisms.

Amount: The average amount of discharge for the first 5–6 days, is estimated to be 250 mL.

Normal duration: The normal duration may extend up to 3 weeks. The red lochia may persist for longer duration especially in women who get up from the bed for the first time in later period. The discharge may be scanty, especially following premature labors or may be excessive in twin delivery or hydramnios.

Clinical importance: The character of the lochial discharge gives useful information about the abnormal puerperal state.

The vulval pads are to be inspected daily to get information:

• Odor: If malodorous, indicates infection. Retained plug or cotton piece inside the vagina should be kept in mind.

• Amount: Scanty or absent — signifies infection or lochiometra. If excessive — indicates infection.

• Color: Persistence of red color beyond the normal limit signifies subinvolution or retained bits of conceptus.

• Duration: Duration of the lochia alba beyond 3 weeks suggests local genital lesion.

LACTATION

For the first two days following delivery, no further anatomic changes in the breasts occur. The secretion from the breasts called colostrum which starts during pregnancy becomes more abundant during the period.

COMPOSITION OF THE COLOSTRUM: It is deep yellow serous fluid, alkaline in reaction. It has got a higher specific gravity; a high protein, vitamin A, sodium and chloride content but has got lower carbohydrate, fat and potassium than the breast milk. It contains antibody (IgA) produced locally.

Advantages: (1) The antibodies (IgA, IgG, IgM) and humoral factors (lactoferrin) provides immunological defense to the new born. (2) It has laxative action on the baby because of large fat globules.

PHYSIOLOGY OF LACTATION

Although, lactation starts following delivery, the preparation for effective lactation starts during pregnancy.

The physiological basis of lactation is divided into four phases:

(a) Preparation of breasts (mammogenesis).

(b) Synthesis and secretion from the breast alveoli (lactogenesis).

(c) Ejection of milk (galactokinesis).

(d) Maintenance of lactation (galactopoiesis).

TEN STEPS TO SUCCESSFUL BREASTFEEDING

Every facility providing maternity services and care for newborn infants should:

1. Have a written breastfeeding policy that is routinely communicated to all healthcare staff.

2. Train all healthcare staff in the skills necessary to implement this policy.

3. Inform all pregnant women about the benefits and management of breastfeeding.

4. Help mothers initiate breastfeeding within a half hour of birth.

5. Show mothers how to breastfeed and how to maintain lactation even if they are separated from their infants.

6. Give newborn infants no food or drink other than breast milk unless medically indicated.

7. Practice rooming-in. Allow mothers and infants to stay together 24 hours a day.

8. Encourage breastfeeding on demand.

9. Give no artificial teats or pacifiers (also called dummies and soothers) to breastfeeding infants.

10. Foster the establishment of breastfeeding support groups and refer mothers to them on discharge from hospital or clinic.

MANAGEMENT OF NORMAL PUERPERIUM

The principles in management are: (1) To restore the health of the mother. (2) To prevent infection. (3) To take care of the breasts, including promotion of breastfeeding. (4) To motivate the mother for contraception.

Immediate attention: Immediately following delivery, the patient should be closely observed. She may be given a drink of her choice or something to eat, if she is hungry. Emotional support is essential. Usually the first feeling of mother is the sense of happiness and relief, with the birth of a healthy baby. The woman needs emotional support when she suffers
from postpartum blues or stress due to newborn's prematurity, illness, congenital malformation or death.

REST AND AMBULANCE: Early ambulation after delivery is beneficial. After a good resting period, the patient becomes fresh and can breastfeed the baby or moves out of bed to go to the toilet. Early ambulation is encouraged. Advantages are: (1) Provides a sense of well-being (2) Bladder complications and constipation are less (3) Facilitates uterine drainage and hastens involution of the uterus (4) Lessens puerperal venous thrombosis and embolism. Following an uncomplicated delivery, climbing stairs, lifting objects, daily household work, cooking may be resumed.

HOSPITAL STAY: Early discharge from the hospital is an almost universal procedure. If adequate supervision by trained health visitors is provided, there is no harm in early discharge. Most women are discharged fit and healthy after 2 days of

spontaneous vaginal delivery with proper education and instructions. Early discharge may be done in a few selected women. Some need prolonged hospitalization due to morbidities (infections of urinary tract, or the perineal wound, pain, or breastfeeding problems).

DIET: The patient should be on normal diet of her choice. If the patient is lactating, high calories, adequate protein, fat, plenty of fluids, minerals and vitamins are to be given. However, in non-lactating mothers, a diet as in non-pregnant is enough.

CARE OF THE BLADDER: The patient is encouraged to pass urine following delivery as soon as convenient. At times, the patient fails to pass urine and the causes are — (1) Unaccustomed position and (2) Reflex pain from the perineal injuries. This is common after a difficult labor or a forceps delivery. If the patient still fails to pass urine, catheterization should be done. Catheterization is also indicated in case of incomplete emptying of the bladder evidenced by the presence of residual urine of more than 60 mL. Continuous drainage is kept until the bladder tone is regained. The underlying principle of the bladder care is to ensure adequate drainage of urine so that infection and cystitis are avoided.

CARE OF THE BOWEL: The problem of constipation is much less because of early ambulation and liberalization of the dietary intake. A diet containing sufficient roughage and fluids is enough to move the bowel. If necessary, mild laxative may be given at bed time.

SLEEP: The patient is in need of rest, both physical and mental. So she should be protected against worries and undue fatigue. Sleep is ensured providing adequate physical and emotional support. If there is any discomfort, such as after pains or painful piles or engorged breasts, they should be dealt with adequate analgesics (Ibuprofen).

CARE OF THE VULVA AND EPISIOTOMY WOUND: Shortly after delivery, the vulva and buttocks are washed with soap water down over the anus and a sterile pad is applied. The patient should look after personal cleanliness of the vulval region. The perineal wound should be dressed with spirit and antiseptic powder after each act of micturition and defecation or at least twice a day. The nurse should use sterilised gloves during dressing.

Cold (ice) sitz baths relieve pain. When the perineal pain is persistent, a vaginal and rectal examination is done to detect any hematoma, wound gaping or infection. For pain Ibuprofen is safe for nursing mothers.

CARE OF THE BREASTS: The nipple should be washed with sterile water before each feeding. It should be cleaned and kept dry after the feeding is over. A nursing brassiere provides comfortable support. Nipple soreness is avoided by frequent short feedings rather than the prolonged feeding, keeping the nipples clear and dry. Nipple confusion is a situation where the infant accepts the artificial nipple but refuses the mother's nipple. This is avoided by making the mother's nipple more protractile and not offering any supplemental fluids to the infant.

MATERNAL–INFANT BONDING (ROOMING-IN): It starts from first few moments after birth. This is manifested by fondling, kissing, cuddling and gazing at the infant. The baby should be kept in her bed or in a cot besides her bed. This not

only establishes the mother-child relationship but the mother is conversant with the art of baby care so that she can take full care of the baby while at home. Baby-friendly hospital initiative promotes parent-infant-bonding, baby rooming with the mother and breastfeeding.

ASEPSIS AND ANTISEPTICS: Asepsis must be maintained especially during the first week of puerperium. Liberal use of local antiseptics, aseptic measures during perineal wound dressing, use of clean bed linen and clothing are positive steps. Clean surroundings and limited number of visitors could be of help in reducing nosocomial infection.

IMMUNISATION: Administration of anti–D–gamma globulin to unimmunized Rh–negative mother bearing Rh–positive baby.

MANAGEMENT OF AILMENTS

After pain — It is the infrequent, spasmodic pain felt in the lower abdomen after delivery for a variable period of 2–4 days. Presence of blood clots or bits of the afterbirths lead to hypertonic contractions of the uterus in an attempt to expel them out. This is commonly met in primipara. The pain may also be due to vigorous uterine contraction especially in multipara. The mechanism of pain is similar to cardiac anginal pain induced by ischemia. Both the types are excited during breastfeeding. The treatment includes massaging the uterus with expulsion of the clot followed by administration of analgesics (Ibuprofen) and antispasmodics.

Pain on the perineum: Never forget to examine the perineum when analgesic is given to relieve pain. Early detection of vulvo-vaginal hematoma can thus be made. Sitz baths (hot or cold) can give additional pain relief.

Correction of anemia: Majority of the women remain in an anemic state following delivery. Supplementary iron therapy (ferrous sulfate 200 mg) is to be given daily for a minimum period of 4–6 weeks.

Hypertension is to be treated until it comes to a normal limit. The physician should be consulted if proteinuria persists.

TO MAINTAIN A CHART: A progress chart is to be maintained noting the following: (1) Pulse, respiration and temperature recording 6 hourly or at least twice a day (2) Measurement of the height of the uterus above the symphysis pubis once a day in a fixed time with prior evacuation of the bladder and preferably the bowel too (3) Character of the lochia (4) Urination and bowel movement.

POSTPARTUM EXERCISE: The objectives of postpartum exercises are: (1) To improve the muscle tone, which are stretched during pregnancy and labor especially the abdominal and perineal muscles. (2) To educate about correct posture to be attained when the patient is getting up from her bed. This also includes the correct principle of lifting and working positions during day-to-day activities.

Advantages gained thereby are: (1) To minimize the risk of puerperal venous thrombosis by promoting arterial circulation and preventing venous stasis (2) To prevent backache (3) To prevent genital prolapse and stress incontinence of urine.

PROCEDURE: (1) Initially, she is taught breathing exercise and leg movements lying in bed. (2) Gradually, she is instructed to tone up the abdominal and perineal muscles and to correct the postural defects. These can well be taught by a trained physiotherapist. The exercise should be continued for at least 3 months.

The common exercises prescribed are: (a) To tone up the pelvic floor muscles: The patient is asked to contract the pelvic muscles in a manner to withhold the act of defecation or urination and then to relax. The process is to be repeated as often as possible each day. (b) To tone up the abdominal muscles: The patient is to lie in dorsal position with the knees bent and the feet flat on the bed. The abdominal muscles are contracted and relaxed alternately and the process is to be repeated several times a day. (c) To tone up the back muscles: The patient is to lie on her face with the arms by her side. The head and the shoulders are slowly moved up and down. The procedure is to be repeated 3–4 times a day and gradually increased each day.

Physical activity should be resumed without delay. Sexual activity may be resumed (after 6 weeks) when the perineum is comfortable and bleeding has stopped.

CHECK-UP AND ADVICE ON DISCHARGE: A thorough check-up of the mother and the baby is mandatory prior to discharge of the patient from the hospital. Discharge certificate should have all the important information as regard the mother and baby.

Advices include: (1) Measures to improve her general health. Continuance of supplementary iron therapy (2) Postnatal exercises (3) Procedures for a gradual return to day-to-day activities (4) Breastfeeding and care of the newborn (5) Avoidance of intercourse for a reasonable period of 4–6 weeks until lacerations or episiotomy wound are well healed (6) Family planning advice and guidance — Non-lactating women should practice some form of contraceptive measures after 3 weeks and the lactating women should start 3 months after delivery (7) To have postnatal check up after 6 weeks.

The method of contraception will depend upon breastfeeding status, state of health and number of children. Natural methods cannot be used until menstrual cycles are regular. Exclusive breastfeeding provides 98% contraceptive protection for 6 months. Barrier methods may be used. Steroidal contraceptions — combined preparations are suitable for nonlactating women and should be started 3 weeks after. In lactating women it is avoided due to its suppressive effects. Progestin only pill may be a better choice for them. Other progestins (DMPA, Levonorgestrel implants) may be used. IUDs are also a satisfactory method irrespective of breastfeeding status.

IMMEDIATE CARE OF THE NEWBORN

Soon after the delivery of the baby, it should be placed on a tray covered with clean dry linen with the head slightly downwards (15°). It facilitates drainage of the mucus accumulated in the tracheobronchial tree by gravity. The tray is placed between the legs of the mother and should be at a lower level than the uterus to facilitate gravitation of blood from the placenta to the infant.

Air passage (oropharynx) should be cleared of mucus and liquor by gentle suction.

Apgar rating at 1 minute and at 5 minutes is to be recorded.

Clamping and ligature of the cord—The cord is clamped by two Kocher's forceps, the nearest one is placed 5 cm away from the umbilicus and is cut in

between. Two separate cord ligatures are applied with sterile cotton threads 1 cm apart using reef-knot, the proximal one being placed 2.5 cm away from the navel. Leaving behind a length of the cord attached to the navel not only prevents inclusion of the embryonic structure, if present, but also facilitates control of primary haemorrhage due to a slipped ligature. The cord is divided with scissors about 1 cm beyond the ligatures taking aseptic precautions so as to prevent cord sepsis.

The purpose of clamping the cord on the maternal end is to prevent soiling of the bed with blood and to prevent fetal blood loss of the second baby in undiagnosed monozygotic twin.

Delay in clamping for 2–3 minutes or till cessation of the cord pulsation facilitates transfer of 80-100 mL blood from the compressed placenta to a baby when placed below the level of uterus. This is beneficial to a mature baby but may be deleterious to a pre-term or a low birth weight baby due to hypervolemia. But early clamping should be done in cases of Rh-incompatibility (to prevent antibody transfer from the mother to the baby) or babies born asphyxiated or one of a diabetic mother.

Quick check is made to detect any gross abnormality and the baby is wrapped with a dry warm towel.

The identification tape is tied both on the wrist of the baby and the mother.

Once the management of third stage is over (usually 10–20 minutes), baby is given to the mother.

Requirements for work results.

- Counsel the woman.
- Assess the woman's condition
- Collection of anamnesis (general, including mental illnesses, obstetric, gynecological, health status of the child's father).
- Inspection and palpation of the mammary glands, measurement of the standing height of the uterine fundus with data entry in the gravidogram; measurement of blood pressure, pulse (frequency, rhythmicity), body temperature, measurement of body weight (for all pregnant women at each visit), examination of the lower extremities for the presence of varicose veins, auscultation of fetal heart rate (for all pregnant women from the 25th-26th week of pregnancy).
- Internal examination
- Laboratory studies
- Tactics and principles of patient management
- Analysis and discussion of survey results
- Multimedia presentation on the subject of the lesson.

PRACTICAL LESSON NO. 3

TOPIC: "EARLY GESTOSIS OF PREGNANT WOMEN. HYPERTENSIVE DISORDERS DURING PREGNANCY. PREECLAMPSIA. ECLAMPSIA".

Aim: To acquaint students with higher education with timely diagnosis, prognosis, prevention and treatment of pregnancy complications, which remain the main strategy in the system of measures aimed at protecting the health of the mother and child. The most alarming complications of pregnancy include preeclampsia. According to the Ministry of Health of Ukraine, during the last decade, preeclampsia is among the top three causes of maternal loss.

Basic concepts: Clinical classification of early gestosis, Classification of hypertensive disorders during pregnancy, preeclampsia and eclampsia. Etiology and pathogenesis. Modern diagnostic methods for early gestosis, preeclampsia, eclampsia Modern principles of prevention preeclampsia and eclampsia, medical rehabilitation patients. Emergency care. Medical rehabilitation patients

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).

A student of higher education should know and be able to define: the concept of "early and late gestosis", classification of early and late gestosis, modern views on the etiology and pathogenesis of early and late gestosis, diagnostic criteria of various forms of early gestosis, diagnostic criteria of various forms of late gestosis. To be able to provide timely help.

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

- Requirements for the theoretical readiness of students of higher education to perform practical classes.

Knowledge requirements:

- Ability to collect medical information about the patient and analyze clinical data.
- Ability to interpret the results of laboratory and instrumental achievements.
- Ability to diagnose: determine preliminary, clinical, final, accompanying diagnosis, emergency conditions.
- Ability to perform medical and dental manipulations.
- Ability to determine tactics, methods and provision of emergency medical assistance.
- Ability to provide pre-medical care according to the protocols of tactical medicine.

List of didactic units:

- Early gestosis: classification, clinic, diagnosis, treatment;
- Hypertensive disorders during pregnancy: definition, classification, treatment;

- Preeclampsia: pathogenesis, classification, diagnosis, clinic, treatment, tactics, prevention;
- Eclampsia: clinic, diagnosis, complications, emergency care, management tactics;-

Questions (tests, tasks, clinical situations) to check the basic level of knowledge on the subject of the lesson.

Questions:

1. What is the definition of "early gestosis"?
2. What is the classification of early gestosis?
3. What is the clinic for vomiting in pregnant women?
4. What examination methods are indicated for vomiting in pregnant women?
5. What is the differential diagnosis of various forms of early gestosis with extragenital diseases?
6. What is the modern terminology, the definition of "preeclampsia"?
7. What is the classification of preeclampsia?
8. What are the risk factors for preeclampsia?
9. What is the clinic for preeclampsia of varying degrees of severity?
10. What is the modern terminology of eclampsia?
11. What factors cause the development of this pathology of eclampsia?
12. What are the doctor's tactics when diagnosing eclampsia?

Situational tasks:

1. A primagravida was admitted to the gynecological hospital at a gestation period of 7-8 weeks with complaints of constant nausea, vomiting up to 15 times a day, lack of appetite, weight loss, temperature rise to 37.5°C. Objectively: icteric sclera and skin, hypotension, tachycardia up to 120 bpm, the smell of acetone from the mouth, diuresis is reduced, in blood tests - hyperbilirubinemia, in urine tests - acetonuria, cylindruria. The therapy carried out for 4 days did not improve the patient's condition. Make a preliminary diagnosis.

Answer: Pregnancy I, 7-8 weeks. Severe vomiting of pregnant women.

2. A 28-year-old primigravida admitted to hospital with regular contractions. Complaints of headache, impaired vision, retardation. Blood pressure - 180/110 mm Hg. Significant edema of the legs, front abdominal wall. The fetal heartbeat is clear, rhythmic, 160 bpm. On internal examination: the opening of the cervix is complete, the fetal bladder is absent. The head of the fetus in the cavity of the small pelvis. What is the management strategy of this patient?

Answer: Emergency care of severe preeclampsia, urgent delivery with the help of cavity obstetric forceps.

Typical test tasks:

1. A 35-year-old pregnant woman with a gestational age of 34-35 weeks complains of a headache. Blood pressure -160/100 mm Hg. Urine analysis is normal. There are no edema. She has been suffering from high blood pressure since she was 16 years old. Make a preliminary diagnosis.

A. Astheno-neurotic syndrome

B. Chronic hypertension

C. Gestational hypertension

D. Moderate preeclampsia

E. Severe preeclampsia

2. A pregnant woman at 37 weeks of geststion has generalized edema, blood pressure - 170/120 mm Hg, proteinuria - 4 g/l. Intrauterine growth restriction of the fetus was detected during ultrasound. What pathology causes such a clinical picture?

A. Astheno-neurotic syndrome

B. Chronic hypertension

C. Gestational hypertension

D. Moderate preeclampsia

E. Severe preeclampsia

3. A 28-year-old primiparous woman went into labor. Complaints of headache, visual disturbances. Blood pressure - 180\110 mm Hg, significant edema of the lower limbs, anterior abdominal wall. The fetal heartbeat is clear, rhythmic - 148 bpm. During the internal obstetric examination: the opening of the cervix is complete, the head of the fetus is on the pelvic floor. Choose the delivery tactics?

A. Conservative labor

B. Stimulation of labor activity

C. Obstetric forceps application operation

D. Cesarean section

E. Fetus-destructive operation

Correct answers:1-B; 2-E; 3-C;

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

- Task content (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 with pregnant and phantoms.

Tasks:

- Subgroup I - to perform measurement of pulse and blood pressure of pregnant, auscultation of the fetus; identification and assessment of edema assessment of the weight gain of a pregnant woman
- Subgroup II - to assess of laboratory parameters; make plan of treatment of early gestosis, treatment of preeclampsia , First aid for an attack of eclampsia.
- Subgroup III – to assess answers of subgroups I and II and makes adjustments.

Non-typical situational tasks

1. A first-time pregnant woman with a gestation period of 38-39 weeks came with complaints of weakness, drowsiness, headache, flickering "flies" in front of her eyes, periodic pains in the epigastric area, edema of her legs. Blood pressure - 170/115 mm Hg. The position of the fetus is longitudinal, the main presentation, the heartbeat of the fetus is 90-100 bpm, muffled. Protein in urine - 5.3 g/l.

Task:

1. Make a diagnosis.

2. What are the patient management tactics?

Answer:

1. Diagnosis: Pregnancy I, 38-39 weeks, longitudinal lie, head presentation. Severe preeclampsia. Fetal distress.

2. Emergency cesarean section.

2. A 28-year-old primipara was admitted to the maternity ward with labor, according to the data, the gestational age is 36-37 weeks, the lie of the fetus is longitudinal, the head presentation. Contractions last 45-50 seconds in 1.5-2 minutes, moderate. The woman complains of a headache. Blood pressure - 160 \ 105 mm Hg. Significant edema of the lower limbs. Protein in urine - 3.3 g/l. Fetal heartbeat up to 180-185 bpm. During the internal obstetric examination: the opening of the cervix is complete, the amniotic sac is absent. The head of the fetus is in the plane of exit from the pelvis.

Task:

1**.** Make a diagnosis.

2. What are the patient management tactics?

Answer:

1. Diagnosis: Gravida I, 36-37 weeks. Para I. Preeclampsia of moderate severity. Fetal distress.

2. Tactics of management - application of output obstetric forceps, treatment of late gestosis.

3. A 25-year-old nulliparous woman at 33 weeks' gestation comes to the labor and

delivery ward complaining of contractions, a headache, and flashes of light in front of her eyes. Her pregnancy has been uncomplicated except for an episode of first trimester bleeding that completely resolved. She has no medical problems. Her t'37 C, BP 160/110 mm Hg, pulse 88/minute, and respirations 12/minute. Longitudinal lie with head presentation of the fetus. Examination: her cervix is 2 cm dilated and 75% effaced, and that she is contracting every 2 minutes. The fetal heart tracing is in the 140s and reactive. Urinalysis shows +++ proteinuria. Laboratory values: leukocytes 9,400/mm3, hematocrit 35%, platelets 101,000/mm3. Aspartate aminotransferase (AST) is 200 U/L, and ALT 300 U/L.

Task:

1. Make a preliminary diagnosis?
2. What is the most appropriate next step in management?

Answer:

1. I pregnancy, 33 week of gestation term. Longitudinal lie with head presentation of the fetus. Moderate preeclampsia.
2. Hospitalization of a pregnant woman in a hospital. Primary laboratory examination: complete blood count, hematocrit, platelet count, coagulogram, ALT and AST, blood group and Rh factor (in the absence of accurate information), general urinalysis, determination of daily proteinuria, creatinine, urea, uric acid, plasma electrolytes (sodium and potassium), fetal health assessment. Nutrition: High-protein food, no salt and water restrictions, and non-thirsty foods. Intravenous injection of Magnesium sulfate 25% 10,0 +NaCl 0,9% 200,0. Dexamethasone 6 mg every 12 hours, four times over 2 days. Nifedipine 10 mg 2-3 times a day.

Non-typical test tasks:

1. At the gestational term 32 weeks of pregnancy, M. developed a severe headache, impaired vision, and pain in the epigastrium. She was not seen by a doctor. General edema of the body and face are present for 2 weeks. Blood pressure 190/100 mm Hg. Facial muscle twitching, convulsions appeared. Emergency services were called. Where to hospitalize a pregnant woman?

A. In the maternity hospital.
B. A. In the neurological department.
C. B. In the cardiology department.
D. C. In the nephrology department.
E. D. In the infectious department.

2. Gravida I, att term 37 weeks of pregnancy, complains of difficulty breathing through the nose, general swelling of the body during the week. Blood pressure 190/120 mm Hg. In the urine - protein 3 g/l. She refused hospitalization. Suddenly, she had twitching of the facial muscles, which turned into tonic and clonic convulsions. She regained consciousness after 3 minutes. What is the diagnosis ?

A. Eclampsia.
B. Eclamptic coma.
C. Epileptic attack.
D. Severe preeclampsia.

E. Eclamptic status.

3. The therapist was called to a woman who was 37 weeks pregnant, who complained of headaches, swelling, difficulty breathing through the nose, and "flickering of flies" in front of her eyes. Objectively: generalized edema. Blood pressure 190/110 mm Hg, protein in urine when it is boiled. What is the diagnosis ?

A. Moderate preeclampsia.
B. Severe preeclampsia.
C. Chronic arterial hypertension.
D. Gestational hypertension.
E. Eclampsia.
Correct answers:1-A, 2-A, 3-B.

Recommendations (instructions) for the performance of tasks (professional algorithms, indicative maps for the formation of practical skills and abilities, etc.)

Early gestosis

The concept of "early gestosis" exists only in the practice of obstetricians - gynecologists CIS. In obstetric practice of foreign countries such thing does not exist, there is state assessed as 'minor' complications of pregnancy, or "unpleasant symptoms during pregnancy". But in the HIC-10, section XV, topic O21 includes vomiting varying degrees of severity during pregnancy, and headings O26 and O28 provide other conditions associated with pregnancy. We therefore consider it appropriate to consider in a separate section of the particular state of pregnancy, under the heading "early gestosis".

The pathology of pregnancy is divided into two groups (for the clinical course):

1. Early gestosis, which often occurs - vomiting of pregnant, excessive salivation, pruritus gravidarum.

2. Early gestosis, which is rare - dermatosis of pregnant, cholestatic hepatosis pregnancy, acute liver steatosis of pregnant, tetania gravidarum, chorea gravidarum, osteomalacia gravidarum, bronchial asthma of pregnancy.

Etiology and pathogenesis of early gestosis.

To explain the causes of early gestosis suggested many theories (toxemic, allergic, endocrine, neurogenic, psychogenic, immune, etc.).

In modern theories of early gestosis is considering as a consequence of violations of neuro-vegetative-immuno-endocrinic-metabolic-regulation, in which the leading role played by the functional state of CNS.

It lasted from excessive impulse fetal egg causes excessive irritation areas of the hypothalamus, brain stem and entities that are involved in the regulation of autonomic functions and inhibition of neural processes in the cerebral cortex. As a consequence - the predominance of excitatory processes in the brain stem (in particular, vomiting center).

Risk factors of early gestosis

• Spouse or acquired deficiency of the neuroendocrine regulation of adaptive responses (hypoxia, infection, intoxication, violation of the regime in childhood and adolescence, and the like).

• Extragenital diseases.
• Violations of the function of the nervous system, stress situations.
• Past medical genital organs, which can cause changes in the receptor apparatus of the uterus and the occurrence of pathological impulse to the CNS.

Vomiting of pregnant

Vomiting of pregnant (emesis gravidarum) is a complex clinical syndrome. The act of vomiting - one of the manifestations of the disease, which develops diarrheal, nimble, secretory, sensory, vascular and other disorders.

In terms of severity, light vomiting (less than 5 times a day), moderate (5 to 10 times) and severe vomiting (hyperemesis gravidarum) with metabolic disorders (more than 10 times a day). It should be noted that in 50% of pregnant women in early pregnancy occurs "morning vomiting, which does not have a pathological nature and does not require medical treatment.

Degree	Status	Frequency of vomiting	Weight loss	HR	laboratory research
I. Light (neurosis phase)	Satisfactory	Up to 5 times	Not more than 3 kg	Norm	Norm
II. Moderate (toxicosis phase)	Relatively satisfactory	6 -10 times	More than 3 kg	Up to 100	Acetone in the urine ++
III. Severe (dystrophy phase)	Severe	Up to 25 times and more	8 - 10 kg and more	Above 100	Acetone in the urine ++++

In determining the severity of the disease determine the clinical manifestations: State of the pregnant woman, dry skin, yellow sclera and skin, the presence or lack of appetite, salivation, nausea, vomiting frequency and intensity, the curve of weight loss, dehydration, heart rate, blood pressure, sub-febrile temperature, value diuresis. Assessment of the severity of vomiting pregnant includes host and the results of laboratory tests: specific gravity of urine, the presence of ketonuria, the presence of acetonitrile, well in urine, the level of bilirubin, creatinine in the blood.

To diagnose and monitor the effectiveness of treatment conducted the following studies:

• control of body weight;
• control of diuresis;
• The dynamics of BP;
• Determining hematocrit and hemoglobin;
• urine (specific gravity, acetone, ketone bodies, protein);
• biochemical study of the blood (bilirubin and its fractions, liver enzyme, creatinine);

• Determining the level of electrolytes in the blood (K, Na, Cl);
• identification of acid-base balance Blood (KFL).
Differential diagnosis of vomiting pregnant should be conducted with the following diseases: food poisoning, gastritis, pancreatitis, pyelonephritis, cholelithiasis, hepatitis, appendicitis, meningitis, brain tumors, etc.

Treatment of vomiting pregnant

A large number of recommended treatments reflect the majority of theories that explain the causes of vomiting pregnant. But uncontrolled use of these treatments for early gestosis in some cases may be harmful, taking into account the fact that in early pregnancy occurs embryogenesis.

Mild vomiting. It is recommended not to hospitalize pregnant women with mild vomiting. We recommend correction of dietary intake: minor (5-6 times a day), balanced nutrition, drink vitamins. Patients were given a light meal, which is well absorbed (biscuits, mashed potatoes, tea, cocoa, coffee, lean meat, fish, eggs, butter, etc.). Take her trail, lying, frequently and in small portions, preferably in chilled.

Non-traditional methods of treatment can be used: reflexology, hypnosis, central electroanalgesia, homeopathic therapy, and others.

Moderate and severe vomiting: pregnant woman needs hospitalization and medical treatment.

Before the reception ability to hold food, medicines should be entered only parenterally. For the influence of the central nervous system as the main pathogenetic factor, to harassment excitability of the vomiting center designate: Etaperazin to 0,002 g, orally, 3-4 times a day, 10-12 days (if the patient holds the tablets); torekan by 1.0 ml intramuscular injection, or 6.5 mg in the form of tablets or rectal suppositories 2 -3 times a day; droperidol on 0,5 - 1,0 ml intramuscularly 1-3 times a day; cerucal 10 mg intramuscularly or orally.

To eliminate hypoproteinemia and dehydration, intravenous targeted administration of protein (plasma), Ringer-Locke solution is necessary. In general, all infusions are carried out only according to indications based on laboratory tests. The amount of fluid is determined by the state of the water balance.

Complication: Excessive vomiting can lead to dehydration, exhaustion, and Mallory-Weiss syndrome (rupture of the stomach lining). In some cases, it is necessary to prematurely terminate the mother's pregnancy. The indication for this is the lack of effect of treatment within 7-10 days, threatening the life of the mother, stable tachycardia, hyperthermia, proteinuria and progressive cylindruria, the presence of jaundice and acetone in the urine.

Prevention of early preeclampsia is the early identification of pregnant women at risk for early development of preeclampsia, and their rehabilitation, treatment of comorbidity, and early registration of pregnancy.

Drooling (*hyper salivation) of *pregnant woman.

Drooling (ptyalismus) observed at pukes, and sometimes self-expression and preeclampsia. The number of saliva during hyper salivation may reach 1.0 liters per day. Drooling does not involve serious disturbances in the body, but also suppresses the psyche of patients, causes maceration of the skin and mucous membrane of the lips. Sometimes, in order to reduce the secretion of the salivary glands prescribed

intramuscular injection of atropine on 0,5 ml 0,1% solution of 2 times a day. Mouth rinse with infusion of sage, mint, chamomile, oak, measles and other astringent agents. Termination of pregnancy in this pathology is not necessary.

Pruritus gravidarum

Itching of pregnancy (pruritus gravidarum) which can be restricted by the region of the vulva and spread all over the body causing irritability and disturbances of sleep is the most frequent form of dermatosis.

Itching of pregnant women should be differentiated with allergic reactions, mycoses, trichomoniasis, diabetes mellitus and helminthoses.

Antihistamine and sedative drugs, vitamins of B group and ultraviolet radiation are used for the treatment.

Rare forms of gestosis

Dermatosis of pregnant women is a group of diseases that arise in connection with pregnancy and disappear after its termination. Prevalence adds 1 in 200 pregnancies. Skin diseases during pregnancy depend on the functional imbalance between the cortex and the subcortex, increased excitability of the autonomic nervous system, which is accompanied by disturbances in the innervation of the skin, metabolic, microcirculatory changes in it. Dermatosis of pregnant women manifests itself in the form of itching of the skin, less often in the form of eczema, urticaria, erythema, papular rashes. The disease does not affect the condition of the fetus.

Treatment of dermatosis: food with limited fats and proteins, drugs that regulate the function of the nervous system and metabolism, antihistamines, rarely systemic or local corticosteroids.

Pemphigoid of pregnant women is a liquid but severe pathology, which is accompanied by premature birth, fetal growth retardation, fetal distress, and increased perinatal mortality. Itchy rashes first appear on the skin of the abdomen near the navel, and then spread to the limbs, arms and reaching the feet. First, these are papules and plaques, after 2 weeks they transform into vesicles and dense vesicles. Diagnosis is based on the detection of complement in the basement membrane of the epidermis. Treatment: Topical 1% hydrocortisone cream or systemic corticosteroids and sedative antihistamines.

Pregnancy with **cholestatic hepatosis** can occur at different stages of pregnancy, but most often occurs in the third trimester and occurs in 1 in 2000 pregnant women. The pathogenesis of this disease has not been studied sufficiently. Factors such as the inhibitory effect of progesterone on the function of cholexcretion, increase in cholesterol production, a decrease in the tone of the biliary system, and an increase in the viscosity of bile can be significant in origin. The onset of jaundice is preceded by the spread of intense itching of the skin. The general situation of patients with cholestatic hepatosis of pregnant women does not change significantly. During laboratory examination, moderate leukocytosis, neutrophilosis, as well as something more pronounced than in uncomplicated pregnancy, an increase in WIDE, is determined. The content of bilirubin in the blood is increased (up to 90 mmol / l) and quickly returns to normal after delivery. Alkaline phosphatase levels rise. There was no increase in liver enzymes such as ALT and AST.

A differential diagnosis should be made when the liver and biliary tract are damaged by mechanical or infectious factors, as well as a result of metabolic disorders. Jaundice may develop as a result of severe intoxication in severe early preeclampsia. Treatment of cholestatic hepatosis consists in the appointment of a balanced diet (diet No. 5) and in the use of funds that help eliminate itching. 3 of this order to use cholestyramine 12-15 mg / day (salt binds bile acids). The use of ursodeoxyholic acid improves liver function. In some cases, this may become necessary when terminating a pregnancy due to an exacerbation of the clinical manifestations of the disease and damage to the fetus. It is advisable to prescribe vitamin K a week before the scheduled birth to reduce the risk of postpartum hemorrhage.

Acute liver steatosis of pregnant women is one of the most severe forms of preeclampsia, which often occurs in late pregnancy (33-40 weeks) with a prevalence of 1 per 100,000 pregnant women and is characterized by a very acute onset and high mortality. Morphologically, this is a pronounced fatty degeneration of the hepatocyte in the absence of signs of necrosis. In the clinical course of fatty degeneration of the liver, two stages are distinguished. Before jaundice, there is abdominal pain, weakness, headache, nausea, debilitating heartburn, itchy skin. Jaundice aggravates the symptoms of hepatic and renal failure, intoxication, encephalopathy, DIC syndrome develops, and fetal death often occurs. The immediate cause of death in a pregnant woman is cerebral edema and severe bleeding coagulopathy.

Treatment of this serious complication is correction of coagulopathy and electrolyte imbalances, cardiorespiratory support, and delivery as feasible by the vaginal route, if possible.

Tetania gravidarum

Tetany of pregnancy (tetania gravidarum) can manifest by convulsions of the upper ("obstetrician's hands") or lower extremities ("ballerina's leg"), face ("fish's mouth"). Disease is related to the reduction of function of parathyroid glands, disturbance of calcium metabolism, rheumatism. Parathyreoidin, calcium preparations, vitamin of B groups, calciferol (D) and tocopherol acetate (E) are used. During the severe course of the disease or ineffective treatment it is recommended to make an abortion.

Chorea gravidarum is the term given to chorea occurring during pregnancy. This is not an etiologically or pathologically distinct morbid entity but a generic term for chorea of any cause starting during pregnancy. Chorea is an involuntary abnormal movement, characterized by abrupt, brief, nonrhythmic, nonrepetitive movement of any limb, often associated with no patterned facial grimaces.

Chorea can also be a manifestation of drug toxicity (for example, anticonvulsants, antiparkinson agents, neuroleptics, steroids, and estrogen), or a result of an infectious disease such as meningovascular syphilis, Lyme disease, viral encephalitis, and many others.

Drug treatment is indicated for patients with severe disabling chorea. It is treated with haloperidol, chlorpromazine alone or in combination with diazepam, and also pimozide, which is another neuroleptic drug which may have fewer adverse effects than haloperidol. Valproic acid, chloral hydrate, risperidone, or phenobarbital can

also be used. Psychotherapy, massage, and muscle stretching exercises used to relieve symptoms during an attack.

Osteomalacia gravidarum is an extremely rare and predetermined decalcification of bone and soft tissue. Most often affects the bones of the pelvis and spine, which is accompanied by their painless stretching. During the palpation of the pubic symphysis a pregnant woman feels painfulness. On X-ray examination of the pelvis sometimes divergence of the bones of the pubic symphysis is detected, however, despite of real osteomalacia, destructive changes in bones are absent.

Treatment of osteomalacia is to normalize phosphor-calcium metabolism. At the present stage, the entire metabolism of minerals in bones, leading to their resorption, is diagnosed using densitometry - a modern ultrasound method for studying bone. Fish fat, calciferol (vitamin D) and ultraviolet radiation are used.

Prevention of early gestosis

Prevention of early preeclampsia consists in the treatment of chronic extragenital diseases of pregnant women, psychoemotional rest of pregnant women, and reducing the influence of environmental factors.

Pregnant women with early preeclampsia, especially with its recurrence, put at risk obstetric and perinatal pathologies (miscarriage, pregnancy, placental insufficiency, fetal hypotrophy, pathology of the newborn), including the prevention of these complications.

Hypertensive disorders in pregnancy.

Hypertension is one of the common medical complications of pregnancy and contributes significantly to maternal and perinatal morbidity and mortality. Hypertension is a sign of an underlying pathology which may be preexisting or appears for the first time during pregnancy. The identification of this clinical entity and effective management play a significant role in the outcome of pregnancy, both for the mother and the baby. In the developing countries with inadequately cared pregnancy, this entity on many occasions remains undetected till major complications supervene. In Ukraine, there is different terminology regarding this pathology. Until then, use the term - hypertension, pregnancy, this can be considered obsolete. The modern terms are – preeclampsia, hypertensive disorders of pregnancy.

Classification of Hypertension in Pregnancy (National High Blood Pressure Education Program 2000)

Disorder	Definition	Disorder	Definition
Hypertension	BP ≥ 140/90 mm Hg measured 2 times with at least a 6-hour interval	Chronic hypertension with super imposed preeclampsia and eclampsia	The common causes of chronic hypertension: (a) Essential hypertension (b) Chronic renal disease (reno vascular) (c) Coarctation of aorta (d) Endocrine disorders (diabetes mellitus, pheochromocytoma, thyrotoxicosis (e) Connective tissue diseases (Lupus erythematosus). t The criteria for diagnosis of super imposed pre-eclampsia: (i) New onset of proteinuria >0.5 gm/24 hours specimen. (ii) Aggravation of hypertension. (iii) Thrombocytopenia or (iv) Raise of liver enzymes
Proteinuria	Urinary excretion of ≥ 0.3 gm protein/24 hours specimen or 0.1 gm/L		
Gestational hypertension	BP ≥ 140/90 mm Hg for the first time in pregnancy after 20 weeks, without proteinuria		
Pre-eclampsia	Gestational hypertension with proteinuria		
Eclampsia	Women with pre-eclampsia complicated with convulsions and/ or coma		
Chronic hypertension	Known hypertension before pregnancy or hypertension diagnosed first time before 20 weeks of pregnancy		
Superimposed pre-eclampsia or eclampsia	Occurrence of new onset of proteinuria in women with chronic hypertension		

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Pre-eclampsia

Pre-eclampsia (PE) is a multisystem disorder of pregnancy previously defined by the onset of hypertension accompanied by significant proteinuria after 20 weeks of gestation. Recently, the definition of PE has been broadened.2–5 PE typically affects 2%–5% of pregnant women and is one of the leading causes of maternal and perinatal morbidity and mortality, especially when the condition is of early onset.6,7 Globally, 76 000 women and 500 000 babies die each year from this disorder.8 Furthermore, women in low-resource countries are at a higher risk of developing PE compared with those in high-resource countries.

Classification Preeclampsia HIC-10: O13-O15

- Light Preeclampsia or gestational hypertension without significant proteinuria
- Preeclampsia moderate
- Heavy Preeclampsia
- Preeclampsia unspecified
- Eclampsia
- Eclampsia during pregnancy
- Eclampsia childbirth
- Eclampsia in the postpartum period
- Eclampsia unspecified for the period
- Etiopatogenesis of Preeclampsia

Risk factors of preeclampsia:

1. Extragenital pathology: kidney, liver, hypertension, chronic lung and bronchus, heart defects, diabetes mellitus, obesity.
2. Obstetric and gynecologic risk factors:

• presence of hypertensive disorders in family history;
• a previous pre-eclampsia;
• age of the pregnant woman (less than 20, more than 30 years);
• hydramnios, twins;
• anemia of pregnant women;
• isosensibilization for Rh-factor and the ABO-system;

3. Social and domestic factors:

• bad habits;
• occupational hazards;
• unbalanced diet.

Knowledge of risk factors of preeclampsia and allow for timely detection of risk groups on the occurrence of preeclampsia.

Diagnosis

Diagnosis of preeclampsia at gestational age more than 20 weeks in the presence of blood pressure more than 140/90 mm hg or with an increase in diastolic blood pressure by 15% of the initial in the first trimester of pregnancy in the presence of proteinuria (protein in daily urine more than 0.3 g / l) and general edema (an increase in the body weight of a pregnant woman more than 900.0 g per week, or 3 kg per month). The diagnosis of preeclampsia determines the presence of hypertension and proteinuria or general edema or the presence of all three signs.

Diagnostic criteria of severe preeclampsia / eclampsia.

Diagnosis	Diast. BP mm. hg	Proteinuria g / ext	Other signs
Gestational hypertension or mild preeclampsia	90-99	<0,3	-

Preeclampsia moderate	100-109	0,3-5,0	Swelling in the face, hands Sometimes a headache
Severe preeclampsia	≥110	>5	Swelling generalize, significant Headache Dysopia Pain in the epigastrium and / or right hypochondrium Hyperreflexia Oliguria (<500 ml / ext) Thrombocytopenia
Eclampsia	≥90	≥0,3	Convulsive attack (one or more)

NB! Available in a pregnant woman at least one of the criteria for more severe preeclampsia is the basis for a diagnosis

To diagnose preeclampsia also need to identify additional clinical and laboratory criteria. Additional clinical and laboratory criteria of preeclampsia

Signs of preeclampsia	Light	Moderately	Heavy
Uric acid, mlmol / l	<0,35	0,35-0,45	> 0,45
Urea, mlmol / l	<4,5	4,5-8,0	> 8
Creatinine, Umol / l	<75	75-120	> 120 or oliguria
x 109 platelets / l	> 150	80-150	<80

Treatment of Preeclampsia

Provision of assistance depends on the pregnant woman, the parameters of BP and proteinuria.

Mild Preeclampsia

In the case of the pregnant woman match the criteria for mild Preeclampsia of pregnancy before 37 weeks of possible care in a hospital day stay. Conduct research: measuring blood pressure, monitoring fluid balance and edema, checking fetal movements.

Conduct laboratory tests: general urine analysis, daily proteinuria, plasma creatinine and urea, hemoglobin, hematocrit, platelet count, coagulogram, ALT and AST, fetal determination (if possible, not a stress test). Drug therapy is not indicated. Do not limit your intake of liquids and table salt.

Indications for hospitalization

The appearance of at least one sign of moderate preeclampsia; fetal hypoxia.

In the case of a stable state of women within the criteria of light preeclampsia tactics of pregnancy expectant. Delivery – per vias naturalis.

Moderate Preeclampsia

Hospitalization of a pregnant woman in a hospital. Initial laboratory tests: complete blood count, hematocrit, platelet count, coagulogram, ALT and AST, blood group and Rh factor (in the absence of accurate information), general urinalysis, determination of daily proteinuria, creatinine, urea, uric acid, plasma electrolytes (sodium and potassium), fetal health assessment.

Protective regime - limitation of physical and mental stress.

Nutrition: High-protein food, no salt and water restrictions, and non-thirsty foods.

A complex of vitamins and minerals for pregnant women, if necessary, an iron supplement. When diastolic BP> 100 mm Hg Appointment of antihypertensive drugs (metildopa of 0,25-0,5 g 3-4 times a day, maximum dose - 3 g per day, and if necessary add nifedipine 10 mg 2-3 times a day, maximum daily dose - 100 mg).

In term pregnancy before 34 weeks of prescribed corticosteroids for prevention of respiratory distress syndrome (RDS) - dexamethasone 6 mg every 12 hours, four times over 2 days.

Research is carried out with a fixed multiplicity of dynamic monitoring indicators:

- blood pressure control - every 6 hours on the first day, then - twice a day;
- auscultation of the fetal heart every 8 hours;
- urine - daily;
- daily proteinuria
- hemoglobin, hematocrit, coagulogram, platelet count, ALT and AST, creatinine Urea - every three days;
- Daily monitoring of fetus

In progress of preeclampsia begin preparations for delivery:

Delivery.

Progression of preeclampsia or deterioration of fetal state - begin preparations for delivery:

- in the case of "immature" cervix - prostaglandin E2 (locally).
- not effective – Cesearian section
- “mature” cervix – stimulation of patrimonal activity and delivery per vias naturalis.

Go to the conduct of pregnant for heavy preeclampsia algorithm is performed in cases of increase of at least one of the following:

- diastolic BP> 110 mm Hg.;
- headache;
- visual impairment;
- pain in the epigastric area and right hypogastric;
- signs of liver failure;
- oliguria (<25 ml / year);
- thrombocytopenia (<100 • 109 / L);
- Signs of WIS-syndrome;
- Enhancement of ALT and AST.

Sever Preeclampsia

The pregnant woman is admitted to the Anesthesiology Unit and Intensive Care Unit Level III to assess the maternal and fetal risk of pregnancy and select a delivery method within 24 hours. Allocate an individual ward for round-the-clock supervision of medical personnel. Immediate consultation by therapists, neurologist, ophthalmologist. Catheterization of peripheral veins. Initial laboratory tests: complete blood count, hematocrit, platelet count, coagulogram, ALT and AST, blood group and Rh factor (if not), total urine, determination of proteinuria, creatinine, urea, total protein, bilirubin and its fractions, electrolytes.

Careful observation of the dynamic:

• Blood pressure control - every hour;

• Urine test - every 4 hours;

• Monitoring of hourly urine output (bladder catheterization)

• Hemoglobin, hematocrit, platelet count, liver function tests, plasma creatinine - every day;

• Auscultation of the fetal heart - every 15 minutes;

- Monitoring of the fetus: the number of movements in 1 hour, heart rate - every day, if possible - Doppler monitoring of blood circulation in the vessels of the umbilical cord, vessels of the fetal brain, placenta and fetoplacental complex;
- Assessment of amniotic fluid and fetal biophysical profile;
- Cardiotocography

Treatment.

Conservative treatment (severe hospital beds). In term of pregnancy to 34 weeks - corticosteroids for the prevention of RDS-dexamethasone 6 mg every 12 hours, four times, for 2 days. The tactics is active with delivery in the next 24 hours from the moment of diagnosis, regardless of the gestational age.

Requirements for the results of the work.

1. External obstetric examination.
2. Auscultation of the fetal heartbeat
3. Internal obstetric research (on a phantom)
4. Collect history
5. Make a plan for clinical and laboratory examination of a pregnant woman with early and late gestosis
6. Evaluate the results of clinical and laboratory tests in a pregnant woman with early and late gestosis.
7. Prescribe treatment for early and late gestosis.
8. Provide first aid for an eclampsia attack
9. Evaluate the results of the biophysical profile of the fetus (BPP)
10. Evaluate the results of a dopplerometric study of blood flow in the umbilical artery
11. Determine and evaluate the fetal heartbeat (auscultatively, CTG).
12. Assess the condition of the newborn according to the Apgar scale

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

Non-typical situational tasks:

1. Gravida II, 30 years old, came to the maternity hospital with complaints of headache, pain in the epigastric region, visual impairment, edema of the lower limbs, anterior abdominal wall. The gestation period is 38 weeks.

Menstruation from the age of 12, regular, last 4-5 days in 28 days, painless. Sex life since 22 years.

The first pregnancy ended with a medical abortion at 10 weeks of pregnancy. The first half of the pregnancy was physiological. In the last 3 weeks, edema appeared on the legs. She did not attend the consultation.

General condition of moderate severity, excited, blood pressure 180/120, 175/115 mm Hg, edema of the lower limbs, abdominal wall. The position of the fetus is longitudinal, the head is in front, pressed against the entrance to the small pelvis. The fetal heartbeat is muffled, rhythmic, 150 bpm on the right, below the navel. During the external obstetric examination, doctor noticed fibrillar twitching of facial muscles and upper limbs.

Blood analysis: Hb - 126 g/l; Ht - 41%, platelets 155 × 109 /l. Urine analysis: proteinuria 4.5 g/l, cylindruria.

Task:

1. Make a diagnosis.

2. What are the medical tactics in this case?

3. With what is it necessary to carry out differential diagnosis for this pathology?

4. How long should magnesium therapy continue after childbirth?

Answer:

1. Pregnancy II, 38 weeks. Longitudinal lie, occipital anterior right presentation. Eclampsia.

2. Doctor's tactics: record the time and call colleagues for help; to protect the woman from damage by holding her during a seizure; prepare equipment (air lines, suction, mask, Ambu bag, oxygen) and magnesium sulfate for bolus administration.

1.After a seizure, if necessary, clean the oral cavity and larynx with an aspirator. Carry out auscultation of the lungs. Place the woman on a flat surface in a position on her left side or with the uterus shifted to the left by 15-20°. Provide oxygen (100% oxygen at a rate of 8-10 L per minute), assess breathing after a seizure, pulse oximetry, lung auscultation to rule out aspiration or pulmonary edema. If prolonged apnea develops, immediately start forced ventilation with a mask with 100% oxygen supply. If convulsions recur or the patient remains in a coma, muscle relaxants (2 mg/kg suxamethonium) are administered and the patient is transferred to artificial lung ventilation (VNA). After the attack, immediately start therapy with magnesium sulfate (inject a bolus of 4 g (16 ml of 25% saline solution + 34 ml of 0.9% sodium chloride solution) for 5 minutes IV, then continue at 1–2 g/h). If the attack is repeated, another 2 g (8 ml of 25% solution) is administered intravenously for 3-5 minutes, do not use diazepam as an alternative to magnesium sulfate. Instead of an additional bolus of magnesium sulfate, you can use diazepam 5-10 mg IV (2-5 mg per minute, maximum 10 mg), OR midazolam 5-10 mg IV for 2-5 minutes, OR clonazepam 1-2 mg IV within 2–5 min. Administer AGT (nifedipine (in drops or chewable tablets), parenteral urapidil or parenteral beta-adrenoblockers) Aim to

lower systolic blood pressure to 130–150 mm Hg. and diasyolic blood pressure up to 80–90 mm Hg. After a seizure, immediate delivery by caesarean section is indicated.
2.Differential diagnosis is carried out with epilepsy, acute disturbance of cerebral circulation, encephalitis, meningitis, rupture of an aneurysm of cerebral vessels, hysteria, uremic coma.
3.Magnesium therapy should last at least 48 hours after childbirt.

Test tasks:

1. A 25 y.o. pregnant woman in her 34th week was taken to the maternity house in grave condition. She complains of headache, visual impairment, nausea. Objectively: solid edema, AP170/130 mm Hg. Suddenly there appeared fibrillary tremor of face muscles, tonic and clonic convulsions, breathing came to a stop. After 1,5 minute the breathing recovered, there appeared some bloody spume from her mouth. In urine: protein - 3,5 g/L. What is the most probable diagnosis?
A. Eclampsia
B. Epilepsy
C. Cerebral hemorrhage
D. Cerebral edema
E. Stomach ulcer
2. A 28 year old parturient complains about headache, vision impairment, psychic inhibition. Objectively: AP200/110 mm Hg, evident edema of legs and anterior abdominal wall. Fetus head is in the area of small pelvis. Fetal heartbeats is clear, rhythmic, 190/min. Internal investigation revealed complete cervical dilatation, fetus head was in the area of small pelvis. What tactics of labor management should be chosen?
A. Forceps operation
B. Cesarean
C. Embryotomy
D. Conservative labor management with episiotomy
E. Stimulation of labor activity
3. A 28-years-old woman complains of nausea and vomiting about 10 times per day. She has been found to have body weight loss and xerodermia. The pulse is 100 bpm. Body temperature is 37, 2oC. Diuresis is low. USI shows 5-6 weeks of pregnancy. What is the most likely diagnosis?
A. Moderate vomiting of pregnancy
B. Mild vomiting of pregnancy
C. I degree preeclampsia
D. Premature abortion
E. Food poisoning
4. A woman at 30 weeks pregnant has had an attack of eclampsia at home. On admission to the maternity ward AP- 150/100 mm Hg. Predicted fetal weight is 1500 g. There is face and shin pastosity. Urine potein is 0, 66o/oo. Parturient canal is not ready for delivery. An intensive complex therapy has been started. What is the correct tactics of this case management?

A. Delivery by cesarean section *
B. Continue therapy and prolong pregnancy for 1-2 weeks
C. Continue therapy and prolong pregnancy for 3-4 weeks
D. Labor induction by intravenous oxytocin or prostaglandins
E. Treat preeclampsia and achieve the delivery by way of conservative management
5. A 25 y.o. pregnant woman in her 34th week was taken to the maternity house in grave condition. She complains of headache, visual impairment, nausea. Objectively: solid edema, BP-170/130 mm Hg. Suddenly there appeared fibrillary tremor of face muscles, tonic and clonic convulsions, breathing came to a stop. After 1,5 minute the breathing recovered, there appeared some bloody spume from her mouth. In urine: protein - 3,5 g/L. What is the most probable diagnosis?
A. Eclampsia
B. Epilepsy
C. Cerebral hemorrhage
D. Cerebral edema
E. Stomach ulcer
6. A 28-years-old woman complains of nausea and vomiting about 10 times per day. She has been found to have body weight loss and xerodermia. The pulse is 100 bpm. Body temperature is 37, 2oC. Diuresis is low. USI shows 5-6 weeks of pregnancy. What is the most likely diagnosis?
A. Moderate vomiting of pregnancy
B. Mild vomiting of pregnancy
C. I degree preeclampsia
D. Premature abortion
E. Food poisoning
7. A woman at 30 weeks pregnant has had an attack of eclampsia at home. On admission to the maternity ward AP- 150/100 mm Hg. Predicted fetal weight is 1500 g. There is face and shin pastosity. Urine protein is 0, 66 g|l. Parturient canal is not ready for delivery. An intensive complex therapy has been started. What is the correct tactics of this case management?
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B. Continue therapy and prolong pregnancy for 1-2 weeks
C. Continue therapy and prolong pregnancy for 3-4 weeks
D. Labor induction by intravenous oxytocin or prostaglandins
E. Treat preeclampsia and achieve the delivery by way of conservative management

Correct answers: 1-A, 2-A, 3-A, 4-A, 5-A, 6-A, 7-A

PRACTICAL SESSION №4
TOPIC: "ACUTE ABDOMEN" IN GYNECOLOGY

Objectives: To acquaint, deepen and systematize knowledge on the topic of the practical session (ectopic pregnancy, ovarian apoplexy, differential diagnosis of "acute abdomen" in gynecology). Knowledge of the anatomical and physiological processes occurring in the body of a woman with gynecological problems is quite relevant and aimed at preserving the patient's life.
Basic concepts: Ectopic pregnancy, ovarian apoplexy, clinic,
diagnosis, management tactics. Emergency care. Preoperative preparation and postoperative management of gynecological patients. Rehabilitation
after gynecological interventions.

1. Organizational measures (greetings, checking the attendees, announcing the topic, the purpose 1of the lesson, motivating higher education students to study the topic).

Higher education students need to treat women with responsibility and consistency in their work, sensitivity and tolerance. The clinical experience of healthcare facilities shows that the most difficult situations for a doctor are those requiring emergency care. Correct and timely emergency care, rationally planned and carried out using gentle methods, can not only save a patient's life, but also preserve her reproductive function. To teach the rules of professional examination, internal obstetric examination and recommendations for appropriate external obstetric care.

To teach the student responsibility and consistency in work, sensitivity and tolerance to a pregnant woman.

To teach the student logical clinical thinking and new diagnostic methods.

2. Control of the reference level of knowledge (written work, written testing, online testing, frontal surveys, etc.)

- Requirements for the theoretical readiness of higher education students to perform practical classes.

Knowledge requirements:

- have communication skills and clinical examination of the patient;
- evaluate information on the diagnosis using a standard procedure, based on the results of laboratory and instrumental studies;
- determine the list of necessary clinical, laboratory, instrumental
and instrumental studies and evaluate their results;
- Identify the leading clinical symptom or syndrome and make a
preliminary diagnosis, make differential diagnosis, determine
clinical diagnosis of the disease;
- determine the principles of treatment of diseases, the necessary mode of work and rest, the nature of nutrition;

- diagnose emergency conditions;
- determine the tactics and provide emergency medical care;
- perform medical manipulations;
- have specialized knowledge of the structure of the female body, its organs and systems;
- Maintain medical records. ability to collect medical information about the patient and analyses clinical data.

List of didactic units:

-Ectopic pregnancy: clinic, diagnosis, management tactics;
- ovarian apoplexy: clinic, diagnosis, management tactics;
- emergency care;
- preoperative preparation and postoperative management of gynecological patients;
- rehabilitation after gynecological interventions.

List of didactic units:

Questions (tests, tasks, clinical situations to check the basic level of knowledge on the topic of the class.

Question:

- What diseases lead to an "acute abdomen" in gynecology?
- Ectopic pregnancy. Definition, classification, etiology, pathogenesis,
- Clinical signs, diagnosis, treatment?
- Ovarian apoplexy. Definition, classification, etiology, clinical picture,
- Diagnosis, treatment?
- Differential diagnosis of "acute abdomen" in gynecology?
- Emergency care?
- How to properly prepare gynecological patients for urgent and planned surgical interventions?
- How to properly manage the postoperative period?
- Rehabilitation after surgery?

Test situational tasks:

Task 1: An 18-year-old female patient was brought to the hospital by an ambulance with complaints of persistent pulling pain in the lower left abdomen. She became acutely ill about 3 hours ago after sexual intercourse, when pain appeared in the lower abdomen on the left. I have been menstruating since the age of 14, the cycle was established in 1 year, currently menstruation is regular, every 30 days, 3 days, moderate, painless. The last menstrual period began 14 days ago, it was on time, without any peculiarities. There was no history of pregnancy. Barrier contraception. About 6 months ago she was treated in a gynecological hospital for acute inflammation of the uterine appendages. From somatic diseases: chronic bronchitis.

Bimanual examination: uterus of normal size and consistency, painless. The right appendages are not detected. On the left, a slightly enlarged, dense, painful ovary is palpated. The vaults are deep, painless.

Parameters are free.

Questions:

1. What is the preliminary diagnosis?
2. What is the doctor's tactic in the absence of signs of intra-abdominal bleeding?

Correct answers:

1. Apoplexy of the left ovary, painful form.
2. Conducting conservative therapy: bed rest, cold on the lower abdomen of the abdomen, administration of hemostatic drugs, analgesics, antispasmodics, if ineffective, surgical treatment.

Task 2. Patient A., 27 years old, consulted a doctor with complaints of periodic pain in the lower abdomen, mainly on the left for two days, slight dark bloody discharge from the genital tract, menstrual delay of 12 days. Anamnesis: menstruation since the age of 15, 4 days, cycle 32 days, painful, moderate. The last menstruation was 45 days ago (12 days delay). Sexual activity since the age of 17. Married since the age of 21. There were no pregnancies, the couple does not use contraception. Objectively: the general condition of the patient is satisfactory. The skin and visible mucous membranes are pale pink. The body temperature is 36.6 °C. Pulse - 78 beats/min, blood pressure - 115/70 mm Hg. breathing; during superficial and deep palpation, soft and painless throughout. There are no signs of peritoneal irritation. Urination is painless. Pasternacki's symptom is negative on both sides.

General examination: stool is normal. Gynecological examination: cervix conical, epithelium unchanged, cyanotic. The external eye is closed. Slight dark bloody discharge from the cervical canal. Bimanual examination: the uterine body is slightly enlarged, relatively mobile, painless to palpation. In the area of the left uterine appendages, a doughy mass with indistinct contours measuring 4.5 x 5.0 x 4.5 cm, limitedly mobile, painful on palpation. The right uterine appendages are not palpable. The vaginal vaults are deep. Discharge from the genital tract is light, dark bloody.

Questions:

1. What is the preliminary diagnosis?
2. What additional laboratory and instrumental methods of examination will allow you to determine the correct diagnosis?

Correct answers:

1. Progressive left-sided tubal pregnancy.
2. Additional methods of research to establish the diagnosis: determination of the level of β-hCG; pelvic ultrasound.

Typical test tasks:

1. A 26-year-old female patient complains of pain in the lower abdomen, smearing bloody discharge from the genital tract. Menstruation is regular, delayed for 2 weeks.

The pregnancy test is positive. Objectively: sharp pain during cervical displacement. The uterus is slightly enlarged. In the area of the right appendages - an elongated soft mass, painful to palpate. There is a slight bloody discharge from the genital tract. What is your diagnosis?

A. Disrupted tubal pregnancy
B. Uterine pregnancy
C. Ovarian apoplexy
D. Acute appendicitis
E. Acute adnexitis

2. A 20-year-old woman complained of a 10-day delay in menstruation. Menstrual dysfunction for the first time. Sexual life is regular, contraception is not used. On examination: satisfactory condition, soft, painless abdomen, blood pressure 120/80 mm Hg, pulse 72 beats per minute. A progressive tubal pregnancy is suspected during transvaginal echography.

What will be the tactics of the antenatal clinic doctor?

A. Perform an abdominal puncture through the posterior vaginal vault
B. Refer the patient for hCG evaluation
C. It is recommended to come back in a week for a follow-up ultrasound
D. Perform functional diagnostic tests
E. Urgently hospitalize the patient

3. A 36-year-old woman complained of heavy bleeding from the genital tract and a month's delay in menstruation. Bimanual examination: barrel-shaped cervix, soft consistency. The uterus is of normal size, slightly softened. Appendages without features on both sides. Examination in mirrors: cervix cyanotic, enlarged in size, external ocellus dilated to 0.5 cm. Urine test for
HCG is positive.

What is the most likely diagnosis?

A. Abortion "in progress"
B. Uterine pregnancy
C. Cervical pregnancy
D. Threat of abortion
E. Ectopic pregnancy

The correct answers are: 1 - A; 2 - E; 3 – C

3. Formation of professional skills (mastering skills, conducting supervision, determining a treatment regimen, conducting laboratory tests).

- Content of the task (tasks, clinical situations, etc.)
Interactive task

We divide the students in the group into 3 subgroups of 4-5 people each. We work in the rooms with dummies and pregnant patients and give them tasks:

Subgroup I - to perform external pelvimetry.

Subgroup II - to measure the Solovyov index and Michaelis rhombus.

Subgroup III - to assess the size of the pelvis, to determine the size of the true conjugate.

Atypical situational tasks

Problem 1. Patient M., 28 years old, was admitted to the gynecological department with complaints of sudden onset of pain in the lower abdomen, which radiated to the thigh, rectum, scapula and clavicle, as well as nausea, dizziness, lethargy, bloody dark discharge from the genital tract for a week, menstrual delay for 4 weeks. She fell ill suddenly at work. She has been menstruating since the age of 14, 5-6 days, 28-day cycle, painless, moderate. The last menstrual period was 8 weeks ago. Sexual activity since the age of 17. She is married. Does not prevent pregnancy. There was one pregnancy 4 years ago, which ended in a medical abortion. Objectively: the general condition of the patient is serious. The skin and visible mucous membranes are pale. There is cold sweat. Breathing is frequent, shallow. The tongue is clean, moist. Limbs are cold to the touch. During the examination, she lost consciousness. The body temperature is 36.4°C. Pulse - 96 beats/min, weak, blood pressure - 85/55 mm Hg. Algover's shock index - 1.13.

The abdomen is moderately distended, palpable in the lower regions. The Shchotkin-Blumberg symptom is positive, and the Kuhlenkampf symptom is noted. Abdominal percussion - blunted percussion sound.

Urination is painless and free. Pasternacki's symptom is negative on both sides. Voiding is not disturbed.

Gynecological examination: cervix conical, epithelium intact, cyanosis of the vaginal mucosa and cervix. Dark, slightly bloody discharge from the cervical canal.

Bimanual examination: cervical excursions are sharply painful, Promptov's symptom is positive. The body of the uterus is slightly enlarged, softened, painful when displaced, the symptom of a "floating uterus" is determined. In the area of the left uterine appendages, a tightly elastic mass measuring 5.0 x 6.0 x 5.0 cm, sharply painful, is palpated. The right uterine appendages are not palpable. The posterior vault is overhanging and sharply painful on palpation ("Douglas's cry"). The genital discharge is light, bloody, dark.

Questions:

1. What is the preliminary diagnosis?
2. What clinical signs confirm the diagnosis?
3. Determine the algorithm of the doctor's action?
4. Define the symptom of Kuhlenkampf?
5. What is the peculiarity of the blood obtained by puncture of the abdominal abdominal cavity through the posterior vault?
6. Classification of tubal pregnancy by location and clinical course?

Correct answers:

1. Disrupted left-sided tubal pregnancy by the type of rupture of the fallopian tube of the fallopian tube. Intra-abdominal bleeding. Hemorrhagic shock of the second degree.

2. Clinical signs confirming the diagnosis:

- complaints and anamnesis: pain occurred suddenly in the lower abdomen with radiation to the thigh, rectum, scapula and clavicle, nausea, dizziness, lethargy, bloody dark discharge from the genital tract for a week, menstrual delay for 4 weeks.

- Objective examination data indicating signs of intra-abdominal bleeding: general condition is severe; loss of consciousness during examination, pallor of skin and visible mucous membranes, cold sweat; frequent and shallow breathing, cold limbs to the touch, hypotension, tachycardia, increased Algover shock index, moderately distended and painful to palpate in the lower abdomen, positive symptoms of Shotkin- Blumberg and Kuhlenkampf symptoms, blunted percussion sound;

- gynecological examination data indicating ectopic pregnancy:

- cyanosis of the vaginal mucosa and cervix, dark, slightly bloody

- discharge from the cervical canal, painful cervical excursions, positive-Promptov's symptoms, Douglas' cry, floating uterus, palpation of a sharply painful, tightly elastic mass measuring 5.0 x 6.0 x 5.0 cm in the area of the left uterine appendages.

3. Algorithm of the doctor's actions: hospitalization; laboratory tests (complete blood count, complete urine count, blood type and Rh factor, coagulogram, blood chemistry); electrocardiogram; pelvic ultrasound; determination of β-hCG levels; in hospitals where laparoscopic diagnostics are not available, abdominal puncture through the posterior vault (culdocentesis) is performed. If blood effusion is detected, urgent laparotomy, tubectomy, sanitation and drainage of the abdominal cavity are performed. In hospitals where laparoscopic surgery is possible, laparoscopy is used as a method of diagnosis and treatment (laparoscopic tubectomy); restoration of circulating blood volume.

4. Kuhlenkampf's symptom is the presence of signs of peritoneal irritation in the absence of local muscle tension in the lower abdomen.

5. If dark, viscous, non-coagulable blood is obtained during culdocentesis, the diagnosis of ectopic pregnancy is considered to be established. If the blood obtained from the abdominal cavity is poured onto gauze, small dark clots will be observed on the gauze, and when examined under a microscope, such blood does not have "coin columns" and has destroyed crescentic or star-shaped red blood cells, this indicates that the blood was obtained from the abdominal cavity.

6. Classification of tubal pregnancy by location: in the ampullary compartment; in the isthmic compartment; in the interstitial compartment.

Classification of tubal pregnancy by clinical course: progressive tubal pregnancy; aborted tubal pregnancy (by type of tubal rupture; by type of tubal abortion).

Task 2. Patient O., 26 years old, came to the gynecological department with complaints of periodic pain in the right inguinal area, nausea, smearing bloody discharge from the genital tract, weakness. The last menstrual period was a month

and a half ago, and for the first time she has noticed a delay in menstruation. She has not been protected from pregnancy for three years. She is physically healthy. Over the past day, she has been experiencing periodic pain in the right inguinal area, which worsened at night, radiating to the anus, and nausea. Bloody discharge increased. Objectively: satisfactory condition. Temperature 37.0 °C.

The anterior abdominal wall is not tense, participates in the act of breathing, there is tenderness in the right iliac region. Symptoms of peritoneal irritation are negative.

In the mirrors: cervix cylindrical, cyanotic, dark bloody discharge from the external pharynx. Vaginally: the uterus is in anteflexion, slightly enlarged, spherical, softened, mobile, painless. The left appendages are unremarkable. To the right of the uterus, enlarged and painful spindle-shaped appendages are detected. Palpation of the posterior vault is moderately painful. The vaginal vaults are deep.

Questions:

1. What is the expected diagnosis?
2. What diseases should be differentially diagnosed?
3. Make an examination plan?
4. Medical tactics in case of confirmation of the diagnosis?
5. Anticipated extent of surgery in case of surgical treatment?

Correct answers:

1. An aborted ectopic pregnancy on the right is a type of tubal abortion.
2. Apoplexy of the ovary, inflammation of the uterine appendages with menstrual irregularities, torsion of the ovarian tumor pedicle, necrosis of the myomatous node.
3. Ultrasound of the genitals, determination of hCG in the blood plasma, complete blood count, general urinalysis, blood group, Rh factor, coagulogram, biochemical blood test; electrocardiogram
4. Surgical treatment in an urgent manner.
5. Tubectomy or tubectomy with enucleation of the ovum.

Atypical test tasks:

1. A woman complains of acute lower abdominal pain radiating to the anus, nausea, dizziness, bloody dark discharge from the genital tract
for a week, delayed menstruation for 4 weeks. Symptoms of peritoneal irritation are positive. In the mirrors: cyanosis of the vaginal mucosa and cervix. Bimanual examination reveals the symptom of a "floating uterus", protrusion and tenderness of the posterior and right lateral vaginal vaults.

What is the most likely diagnosis?

A. Acute appendicitis
B. Ovarian apoplexy
C. Acute right-sided adnexitis
D. Torsion of the ovarian tumor pedicle
E. Disturbed ectopic pregnancy

2. A 23-year-old female patient was urgently admitted to the hospital with complaints of pain in the lower abdomen, more intense on the right, with irradiation to the rectum, dizziness. The above complaints appeared suddenly at night. The last menstruation was 2 weeks ago. Objectively: pale skin, pulse rate - 92/min, body temperature - 36.6 C, blood pressure - 100/60 mm Hg. Hemoglobin is 98 g/l. What is the preliminary diagnosis?

A. Ovarian apoplexy
B. Disturbed ectopic pregnancy
C. Acute appendicitis
D. Intestinal obstruction
E. Renal colic

The correct answers are:
1 - E; 2 - A

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

Classification of ectopic pregnancy

Depending on the location of the fetal egg in the fallopian tube: ampullary, hysterical, interstitial.

Depending on the course of the ectopic pregnancy: progressive ectopic pregnancy; tubal pregnancy terminated by tubal abortion; tubal pregnancy terminated by rupture of the fallopian tube.

Algorithm for diagnosing ectopic pregnancy

1. Clinical picture:

The main complaints of patients with ectopic pregnancy are menstrual delay, bleeding from the genital tract, pain, nausea. In urgent gynecology, disturbed tubal pregnancy - tubal rupture or tubal abortion - is more common.

Ectopic pregnancy disrupted by tubal rupture: characterized by an acute onset, which is usually preceded by a delay in menstruation.

The pain in the lower abdomen is sharp, cramping, irradiating to the anus, sub- and supraclavicular areas, shoulder or shoulder blade, accompanied by nausea, vomiting, dizziness, and loss of consciousness is possible during an intense pain attack.

Objectively: skin and mucous membranes are pale, extremities are cold. Tachycardia, weak pulse, low blood pressure. The abdomen is slightly distended, painful on palpation, more on the affected side, moderate tension of the abdominal wall muscles, symptoms of peritoneal irritation.

Percussion - dullness in the abdomen.

Gynecological examination: cyanosis of the vaginal mucosa and exocervix when examined with mirrors.

Bimanual examination (very painful) reveals: the uterus is enlarged, but less than the expected gestational age, easily displaced, as if "floating" in free fluid. In the area of the uterine appendages, pastiness is detected or a tumor-like mass is palpated. The posterior and one of the lateral vaults are overhanging; when trying to dislodge the cervix and palpating the posterior vault, there is sharp pain with radiation to the rectum.

Ectopic pregnancy disrupted by a tubal abortion: the termination of this pregnancy is characterized by a slow course (from several days to several weeks). The main complaints are: paroxysmal pain in the lower abdomen, smearing, light, dark brown or almost black discharge from the genital tract against the background of menstrual delay (due to rejection of the decidual membrane as a result of a decrease in the level of sex hormones). There may be recurrent short-term fainting spells, weakness, dizziness, cold sweats, vomiting.

Gynecological examination shows cyanosis of the mucous membranes, slight blood discharge from the cervical canal. Uterine enlargement does not correspond to the gestational age. In the area of the right or left uterine appendages, a moderately mobile tumor-like mass with indistinct contours is palpated. The posterior and corresponding lateral vault are flattened or protruded, moderately painful. Abdominal pregnancy is very rare. The fetal egg can attach to any organ of the abdominal cavity, except for the intestine. As a rule, it ends with rupture of the capsule of the ovum in the early stages and significant bleeding and peritoneal shock.

Cervical pregnancy - in the early stages is asymptomatic, later there is a bloody discharge. On examination, there is a bulbous enlargement of the cervix. There is a high risk of profuse bleeding.

2. Laboratory and instrumental diagnostics: Ultrasound of the pelvic organs, abdominal cavity; determination of the level of human chorionic gonadotropin (hCG); abdominal puncture through the posterior vaginal vault (in case of ectopic pregnancy, dark, non-coagulable blood is detected); endometrial biopsy (in case of ectopic pregnancy, the endometrium is transformed into the decidual membrane in the form of the Arias-Stella phenomenon and "light glands"
Overbeck's gland and chorionic villi are not detected); laparoscopy (the most informative diagnostic method in 97-100% of cases).

Treatment algorithm for ectopic pregnancy

1. Treatment can be surgical and conservative. The choice of method depends on the clinical course, the location of the fetal egg, the woman's reproductive plans, and the capabilities of the medical institution.

2. Surgical treatment remains the most common method of treating ectopic pregnancy. The patient should be operated on immediately after the diagnosis of a disrupted ectopic pregnancy. Additionally, infusion therapy is performed (the volume and rate of solution administration depends on the amount of blood loss/stage of hemorrhagic shock).

Surgical treatment of tubal pregnancy is possible by laparoscopic and laparotomy approach. With any method, both radical (tubectomy - performed in case of a disrupted tubal pregnancy accompanied by massive bleeding and distinct pathological changes
of the fallopian tubes, rupture) and organ-preserving operations (fimbria evacuation, segmental resection of the fallopian tube, salpingotomy (tubectomy).

3. In modern practice, it is possible to use conservative methods of treating ectopic pregnancy. They are performed only in a gynecological hospital if a woman wishes to preserve her reproductive function, has an unbroken tubal pregnancy, and does not have severe somatic diseases.

In most cases, methotrexate is used - a folic acid antagonist that causes embryo death with subsequent tubal abortion or resorption of the fetal egg without damaging the endosalpinx.

Contraindications for methotrexate: thrombopenia, leukopenia, severe liver and kidney disease, ovum diameter greater than 3 cm, more than 100 ml of blood in the Douglas space.

4. In cervical pregnancy, the uterus is extirpated without appendages.

Clinical forms of ovarian apoplexy:

1. Anemic form: I degree - mild (blood loss up to 150 ml); II degree - moderate (150 - 500 ml); III degree - severe (more than 500 ml).

The clinical picture of the anemic form is dominated by symptoms of intra-abdominal bleeding: acute pain in the abdomen, above the pubic area or in the iliac region with radiation to the anus, external genitalia; nausea, vomiting, weakness, dizziness; pallor of the skin and mucous membranes; lowered blood pressure, tachycardia; moderate symptoms of peritoneal irritation on the side of the lesion; percussion detection of free fluid in the abdominal cavity. Gynecological examination: pale vaginal mucosa; overhanging of the posterior and lateral vaginal vaults (in case of significant bleeding); enlarged, painful ovary; painful cervical traction.

2. The painful form is characterized by the presence of hemorrhage in the ovarian tissue (follicle or corpus luteum) without bleeding or with slight bleeding into the abdominal cavity. The main symptoms are: acute onset, paroxysmal pain; nausea, vomiting; blood pressure, pulse is normal. The abdomen is often soft, but some tension of the abdominal wall muscles in the iliac regions may be detected. The abdomen is tender in the lower parts during palpation. No free fluid is detected in the abdominal cavity. There is no bloody discharge from the genital tract. The gynecological examination reveals a normal-sized uterus, the displacement of which causes pain; an enlarged, painful ovary. The vaults are deep and free. 3. Mixed form combines symptoms of anemic and painful forms in different proportions.

Algorithm of laboratory and instrumental diagnostics of ovarian apoplexy:

-Comprehensive blood count (anemic form - anemia; painful form - leukocytosis without neutrophil shift, no signs of anemia);

- Ultrasound of the pelvic organs;

- HCG (to exclude ectopic pregnancy);
- abdominal puncture through the posterior vaginal vault;
- laparoscopy.

Algorithm for the treatment of ovarian apoplexy

1. The anaemic form of the disease requires urgent surgical treatment (laparoscopy or laparotomy). A wedge resection of the ovary within healthy tissue or suturing of the tear with a Z-shaped suture is performed. The entire ovary is removed only in cases where all its tissue is saturated with blood.
2. The painful form of ovarian apoplexy without clinical signs of increasing internal bleeding can be treated conservatively under the control of central haemodynamics and laboratory blood counts. Rest, cold on the lower abdomen, haemostatic drugs, vitamins, anti-inflammatory therapy, etc. are prescribed. Conservative therapy is carried out in a hospital under the supervision of medical staff.

Algorithm of examination of gynecological patients before planned surgical intervention:

1. General physical examination
2. Gynecological examination
3. Determination of blood group and Rh factor
4. Blood test for RW, HIV; Hbs - a / a
5. Complete blood count
6. General urine analysis
7. Biochemical blood test (total protein, creatinine, urea, bilirubin, ALT, AST, blood sugar)
8. Coagulogram
9. Cytological examination of smears from the surface of the cervix and cervical canal
10. Bacteriological and bacterioscopist analysis of the genital tract discharge (urethra, cervical canal, vagina)
11. Examination for human papillomavirus (HPV 16, 18 type PCR)
12. Colposcopy (if indicated)
13. Ultrasound examination of the pelvic organs
14. Ultrasound examination of abdominal organs, kidneys
15. Electrocardiogram
16. Fluorography or radiography of the chest organs
17. Examination by a therapist
18. Consultations of specialized specialists (if indicated)
19. Fibro gastroduodenoscopy (FGDS), colonoscopy (if indicated)
20. Cancer markers (according to indications)

Algorithm for the management of the postoperative period:

1. After the operation, observation is carried out in the intensive care unit with constant monitoring of the general condition and well-being, skin colour, functional state of organs and systems.

2. Treatment and prevention of postoperative disorders:

a) postoperative pain: analgesics (2 % primidolol solution 1 ml after 6 hours, 50 % analgen solution 2 ml or other drugs);

b) nausea and vomiting: infusion therapy, narcotic analgesics, sedatives, oxygen therapy;

c) correction of microcirculatory disorders: hypovolemia syndrome - infusion therapy (red blood cell mass, plasma, etc., crystalloid solutions);

d) intestinal paresis: active management of patients (getting up on the first day after surgery, exercise therapy), gas tube, enemas, hypertonic sodium chloride solution, pharmacological agents, stimulating intestinal function (Proserpine).

3. Antibacterial therapy. In parallel with antibacterial therapy, antifungal agents (nystatin) are prescribed for the prevention of candidiasis.

4. Monitoring the condition of the surgical wound sutures with its daily examination and dressing change. In the normal course of the postoperative period, the sutures are removed on the 7th-8th day.

5. Observation of the discharge from the genitals, from the drains.

6. Monitoring the absence of symptoms of peritoneal irritation.

7. Patients are discharged from the hospital on the 5th-9th day.

8. Patients' nutrition - in the first two days, a zero table is prescribed, then table No. 2 with a transition to a general table within 4-5 days if there are no contraindications.

9. Physiotherapy, exercise therapy, early activation of patients contributes to a more favorable course of the postoperative period.

10. Restoration of hormonal homeostasis, prescription of contraceptives (if indicated)

Abdominal puncture through the posterior vaginal vault

Indications: suspected ectopic pregnancy, ovarian apoplexy, intra-abdominal bleeding, recto-uterine abscess.

Instruments for puncture: spoon-shaped vaginal mirror, vaginal elevator, ball forceps, 10-12 cm long puncture needle, coronary forceps.

Technique: the patient is placed on a gynecological chair. The external genitalia, vagina and cervix are disinfected with alcohol and 5% iodine tincture. The vaginal part of the cervix is exposed with the help of a rear mirror and a lift, and the labia are grasped with ball forceps. The lift is removed and the rear-view mirror is handed over to the assistant. The cervix is pulled forward with ball forceps, while the mirror is used to press on the back wall of the vagina and thus stretch the posterior vault as much as possible. Under the cervix, a needle is passed through the posterior vault strictly along the midline, 1 cm from the point where the vault passes into the vaginal part of the cervix. The needle penetrates to a depth of 2-3 cm. When puncture of the

vault, there is a feeling of the needle falling into the void. After that, pull the syringe plunger towards you. The liquid is obtained by pulling the plunger or simultaneously with the slow release of the needle.

Requirements for the results of work, including design

1. Collect complaints, history of a patient with an "acute" abdomen
2. Carry out differential diagnosis
3. Establish a diagnosis and make a plan of treatment in a patient with an "acute" abdomen.
4. Make a plan for the examination of a patient with an "acute" abdomen.
5. Correctly interpret the data of laboratory and instrumental research methods.
6. Provide recommendations on the choice of surgical treatment.
7. Make a plan for preoperative preparation of the patient
8. Make a plan for postoperative management of the patient

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

Atypical situational tasks:

Task 1. Patient I., 32 years old, consulted a doctor with complaints of heavy bloody discharge from the genital tract, periodic pulling pain in the lower abdomen, general weakness, delayed menstruation for 2 weeks. Menstruation since the age of 12, 6 days, 30-day cycle, painless, moderate, regular. Sexual activity since the age of 20.

Objectively: the general condition of the patient is satisfactory. The skin and visible mucous membranes are pale pink in color. The tongue is moist, not coated. The body temperature is 36.5 °C. Pulse - 84 beats per minute, blood pressure - 100/65 mm Hg. The abdomen is not distended, participates in the act of breathing; during superficial and deep palpation - soft and painless throughout. Symptoms of peritoneal irritation are negative. Urination is painless and free. Pasternacki's symptom is negative on both sides. The stool is normal.

Gynecological examination: the cervix is enlarged, deformed, "barrel-shaped", cyanotic. The external oculus is slightly open, eccentrically located. Abundant bloody discharge from the cervical canal. Bimanual examination: cervix enlarged, softened. The uterine body is not enlarged, sensitive to palpation, mobile. The uterine appendages on the right and left are not enlarged, the area of palpation is painless. The vaults are free. Discharge from the genital tract is bloody, profuse.

Questions:

1. Establish a preliminary diagnosis?
2. Algorithm for managing a woman?
3. Tactics of treatment of the patient?

Correct answers:

1. Cervical pregnancy. Abnormal uterine bleeding.

2. Algorithm of patient management: emergency hospitalization to a gynecological hospital for further examination and treatment; transvaginal ultrasound of the pelvic organs; determination of the level of β-hCG.

3. Surgical treatment of the patient - extirpation of the uterus without appendages.

Task 2.

Patient B., 21 years old, was admitted to the gynecological department with complaints of sharp pain in the lower abdomen, radiating to the anus, dizziness, which occurred suddenly after coitus. She had a short-term loss of consciousness at home. Menstruation since the age of 13, established in 2 years, 7 days, cycle 28-34 days, painless, moderate. The last menstruation was 2 weeks ago, as expected. She has been sexually active for a year. She has not been pregnant. The last visit to the gynecologist was 3 months ago, no gynecological pathology was detected.

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

Gynecological examination: cervix conical, epithelium unchanged. The external eye is closed. Bimanual examination: cervical excursions are sharply painful, Promptov's symptom is positive. The uterine body is in the anteflexion position, not enlarged, dense, sensitive to palpation, mobile. In the area of the right uterine appendages, a tightly elastic mass measuring 5.0x6.0x5.0 cm is palpated, sharply painful. The left uterine appendages are not palpable. The posterior vaginal vault is overhanging and sharply painful on palpation. Discharge from the genital tract is bloody, scanty.

Complete blood count: hemoglobin - 94 g/l, erythrocytes - 2.9 - 1012/l, leukocytes - 5.4 - 109 /l.

Questions:

1. What is the preliminary diagnosis?
2. Make a plan for further examination of the patient?
3. What determines the tactics of treatment (conservative or surgical) in patients with ovarian apoplexy?
4. Determine the extent of surgical intervention in this patient?
5. Postoperative rehabilitation of the patient?

Correct answers:

1. Apoplexy of the right ovary, mixed form. Intra-abdominal intra-abdominal bleeding. Hemorrhagic shock I. Anemia I.

2. Plan for further examination of the patient: general clinical and biochemical laboratory tests (complete blood count, complete urinalysis, blood group and Rh factor, biochemical blood test, coagulogram), electrocardiogram; pelvic ultrasound; rapid urine hCG test.

3. Treatment tactics depend on the general condition of the patient, the volume of intra-abdominal bleeding, and hemodynamic parameters.

4. The scope of surgical intervention in this woman is resection/suturing of the right ovary. Sanitation and drainage of the abdominal cavity.

5. In order to prevent recurrence of ovarian apoplexy, it is necessary to prescribe combined hormonal contraceptives for 4-6 months.

Test tasks KROK-2:

1. An ambulance delivered a woman with cramping pain in the right hypochondrium, radiating to the rectum, bloody discharge from the genital tract. The above complaints arose after a delay in menstruation.

Objectively: Heart rate 100 beats per minute, blood pressure 90/60 mm Hg. The abdomen is painful to palpation, positive Shotkin-Blumberg symptom. Gynaecological examination - cervical displacements are painful, right appendages are enlarged, painful, posterior vault is overhanging, discharge is bloody.

Make a preliminary diagnosis:

A. Acute right-sided adnexitis
B. Ectopic pregnancy that has been terminated
C. Abortion "on the go"
D. Apoplexy of the right ovary
E. Appendicitis

2. A 27-year-old patient complains of cramping pain in the lower abdomen, which periodically increases, bloody discharge from the genital tract. The periods are regular. The last menstruation was 6 weeks ago. The general condition is unsatisfactory. Blood pressure 90/60 mm Hg, pulse 100 beats/min, rhythmic. The abdomen is tense, painful. The Shotkin-Blumberg symptom is positive. Vaginal examination: the uterus is slightly enlarged, painful when displaced, the appendages are not clearly defined due to tension of the muscles of the anterior abdominal wall, the posterior vault is overhanging. The discharge is bloody.

Which diagnosis is most likely?

A. Ovarian apoplexy
B. Necrosis of the myoma node
C. Disturbed ectopic pregnancy
D. Rupture of the ovarian cyst
E. Rupture of the pyosalpinx

The correct answers are: 1 - B; 2 - C;

FORMS OF CONTROL AND EVALUATION METHODS (INCLUDING CRITERIA FOR EVALUATING LEARNING OUTCOMES)

Current control: oral survey, assessment of communication skills during role play, solving situational clinical tasks, assessment of activity in class.
Final control: credit.
Evaluation of the current educational activity in a practical lesson:
1. Evaluation of theoretical knowledge on the subject of the lesson:
- methods: survey, solving a situational clinical problem
- maximum score – 5, minimum score – 3, unsatisfactory score – 2.
2. Assessment of work with patients on the subject of the lesson:
- methods: assessment of: a) communication skills of communication with the patient b) the correctness of prescribing and evaluating laboratory and instrumental studies before using a contraceptive c) the ability to conduct family planning counseling.
- maximum score – 5, minimum score – 3, unsatisfactory score – 2.
The grade for one practical lesson 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.

Criteria of ongoing assessment at the practical class

«5»	The student is fluent in the material, takes an active part in discussing and solving a situational clinical problem, confidently demonstrates practical skills and interprets the results of clinical, laboratory and instrumental studies, expresses his opinion on the topic, and 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 and interprets the results of clinical, laboratory and instrumental studies with some errors, expresses his opinion on the topic, and demonstrates clinical thinking.
«3»	The student does not have enough material, uncertainly participates in the discussion and solution of the situational clinical problem, demonstrates practical skills during the examination and interprets the results of clinical, laboratory and instrumental studies with significant errors.
«2»	The student does not have the material, does not participate in the discussion and solution of the situational clinical problem, and does not demonstrate practical skills during the examination and interpret the results of clinical, laboratory and instrumental studies.

Credit is given to the student who completed all tasks of the work program of the academic discipline, took an active part in practical classes, completed and defended an individual assignment and has an average current grade of at least 3.0 and has no academic debt. Assessment is carried out: at the last lesson before the beginning of the examination session - with the tape system of learning, at the last lesson - with

the cycle system of learning. The credit score is the arithmetic mean of all components according to the traditional four-point scale and has a value that is rounded according to the statistics method with two decimal places after the decimal point.

DISTRIBUTION OF POINTS RECEIVED BY STUDENTS

The obtained average score for the academic discipline for students who have successfully mastered the work program of the academic discipline is converted from a traditional four-point scale to points on a 200-point scale, as shown in the table:

Conversion table of a traditional assessment into a multi-point scale

National assessment for the discipline	The sum of points for the discipline
Perfect «5»	185 – 200
Good «4»	151 – 184
Satisfactory «3»	120 – 150
Unsatisfactory «2»	<120

A multi-point scale (200-point scale) characterizes the actual success of each applicant in learning the educational component. The conversion of the traditional grade (average score for the academic discipline) into a 200-point grade is performed by the information and technical department of the University. According to the obtained points on a 200-point scale, the achievements of the students are evaluated according to the ECTS rating scale. Further ranking according to the ECTS rating scale allows you to evaluate the achievements of students from the educational component who are studying in the same course of the same specialty, according to the points they received. The ECTS scale is a relative-comparative rating, which establishes the applicant's belonging to the group of better or worse among the reference group of fellow students (faculty, specialty). An "A" grade on the ECTS scale cannot be equal to an "excellent" grade, a "B" grade to a "good" grade, etc. When converting from a multi-point scale, the limits of grades "A", "B", "C", "D", "E" according to the ECTS scale do not coincide with the limits of grades "5", "4", "3" according to the traditional scale. Acquirers who have received grades of "FX" and "F" ("2") are not included in the list of ranked acquirers. The grade "FX" is awarded to students who have obtained the minimum number of points for the current learning activity, but who have not passed the final examination. A grade of "F" is assigned to students who have attended all classes in the discipline, but have not achieved a grade point average (3.00) for the current academic activity and are not admitted to the final examination. Students who study in one course (one specialty), based on the number of points scored in the discipline, are ranked on the ECTS scale as follows: Conversion of the traditional grade from the discipline and the sum of points on the ECTS scale

Conversion of traditional assessment in the discipline and the amount of points on the ECTS scale

Assessment on the ECTS scale	Statistical indicator
A	The best 10% of students
B	The next 25% of students
C	The next 30% of students
D	The next 25% of students
E	The next 10% of students

METHODOLOGICAL PROVISION

- Working program of the academic discipline
- Syllabus
- Methodical developments for practical classes
- Materials for independent work of students of higher education
- -Multimedia presentations
- Situational clinical tasks and test tasks
- Scenarios of role-playing games (if necessary)

LIST OF THEORETICAL QUESTIONS FROM THE DISCIPLINE "OBSTETRICS AND GYNECOLOGY"

1. Physiological changes in a woman's body during pregnancy. Hygiene and nutrition of a pregnant woman.
2. Methods of examination of pregnant women. External and internal obstetric examination of pregnant women.
3. Topography of the fetus in the uterus. Determination of fetal lie, position and presentation of the fetus.
4. Maintenance of physiological pregnancy.
5. Biomechanism of childbirth in the occipital anterior presentation.
6. First period of labor (opening of the cervix of the uterus). Clinic, management.
7.Second stage of labor (childbirth periods) Their duration in prima and multipara woman.
8. The period of expulsion of the fetus. Clinic, management.
9. The third stage of labor (postnatal period). Signs of placental abruption. Clinic, follow-up period management (active management, conservative management tactics).
10.Evaluation of placenta integrity. Concept of physiological and pathological blood loss.
11. Psychoprophylactic analgesia for childbirth.
12. Clinic and management of the postpartum period.
13. The concept of breastfeeding. Advantages between breastfeeding and artificial feeding.
14. Evaluation of the newborn according to the Apgar scale.

15. Early gestosis. Classification. Clinic, diagnosis and treatment of early gestosis.
16. Hypertensive disorders during pregnancy, classification.
17. Preeclampsia, pathogenesis: classification, diagnosis, clinic, treatment, management tactics, prevention.
18. Eclampsia: clinic, diagnosis, complications, management tactics, emergency care algorithm.
19. Ectopic pregnancy. Clinic, diagnostics, managment, emergency care.
20. Ovarian apoplexy. Clinic, diagnostics, management.

Recommended literature

Basic literature:

1. Obstetrics: student's book / Акушерство: підручник / Gladchuk I.Z., Ancheva I.A. Vinnytsia: Nova Knyga, 2021. –288 p.
2. Obstetrics and Gynecology: in 2 vol.:textbook. Volume 2. Gynecology / V.I. Gryshchenko, M.O. Shcherbina, B.M. Ventskivskyi et al.; edited by V.I. Gryshchenko, M.O. Shcherbina. — 3th edition. – K.: AUS Medicine Publishing, 2022 – 352 p.
3. Obstetrics and Gynecology: in 2 vol.:textbook. Volume 1. Obstetrics / V.I. Gryshchenko, M.O. Shcherbina, B.M. Ventskivskyi et al.; edited by V.I. Gryshchenko, M.O. Shcherbina. — 2th edition. – K.: AUS Medicine Publishing, 2018 – 392 p.
4. Oats, Jeremy Fundamentals of Obstetrics and Gynaecology [Text]: Liewellyn-Jones Fundamentals of Obstetrics and Gynaecology / J. Oats, S. Abraham. – 10th ed. – Edinburgh [etc.]: Elsevier, 2017. – VII, 375 p.
5. Llewellyn-Jones Fundamentals of Obstetrics and Gynaecology (10th Ed). Jeremy Oats, Suzanne Abraham. Elsevier. 2016. – 384 pp.
6. The FIGO Textbook of Pregnancy Hypertension. An evidence-based guide to monitoring, prevention and management. L. A. Magee, P. Dadelszen, W. Stones, M. Mathai (Eds), The Global Library of Women's Medicine. – 2016. – 456 pp.
7. Dutta, Durlav Chandra. D. C. Dutta's Textbook of Gynecology including Contraception / D.C. Dutta; ed/ Hiralal Konar. – 7th.ed. – New Delhi: Jaypee Brothers Medical Publishers, 2016. – XX, 574 p.

Additionally literature:

1. The FIGO Textbook of Pregnancy Hypertension. An evidence-based guide to monitoring, prevention and management. L. A. Magee, P. Dadelszen, W. Stones, M. Mathai (Eds), The Global Library of Women's Medicine. – 2016. – 456 pp.
2. Obstetrics: Normal and Problem Pregnancies, 7th Edition S. Gabbe, J. R. Niebyl, J. L. Simpson, M. B. Landon, H. L. Galan, E. R. M. Jauniaux, D. A. Driscoll, V. Berghella and W. A. Grobman, Elsevier. – 2017. – 1320 pp.
3. Modern technical teaching aids (see appendix to the work program of the 4th year)
4. 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)
5. Normative documents of the Ministry of Health of Ukraine on obstetrics and gynecology:
- Order No. 676 of 12/31/2004 "On approval of clinical protocols for obstetric and gynecological care"
- Order No. 782 dated 12.29.2005 "On the approval of clinical protocols for obstetric and gynecological care"(as amended in accordance with the orders of the Ministry of Health)
- Order No. 900 of 12/27/2006 Clinical protocol on obstetric care. "Fetal distress during pregnancy and childbirth."
- Order No. 901 dated 27.12.2006 Clinical protocol on obstetric care. "Transferred pregnancy".
- Order No. 906 of 12/27/2006 Clinical protocol on obstetric care. Perinatal infections.
- Order No. 540 dated 04.08.2006 On approval of the principles of breastfeeding support, criteria and procedure for evaluating a health care facility for compliance with the status "Child-friendly Hospital".
- Order No. 716 dated 14.11.2007 "On the approval of the clinical protocol for obstetric care "Prevention of transmission of HIV from mother to child".
- Order No. 502 dated August 29, 2008, "On approval of the clinical protocol for antibacterial prophylaxis in surgery, traumatology, obstetrics and gynecology"
- Order No. 624 03.11.2008 Clinical protocol for obstetric care "Normal childbirth".
- Order No. 417 dated 15.07.2011 "On the organization of ambulatory obstetric and gynecological care in Ukraine"
- Order No. 976 of 12/27/2011 Vaginal delivery after caesarean section (C-section)
- Order No. 977 of 12/27/2011 Clinical protocol for obstetric care "Caesarean section".
- Order No. 423 dated 05/24/2013 "On approval of the procedure for providing complex medical care to a pregnant woman during an unwanted pregnancy, forms of primary accounting documentation and instructions for filling them out"
- Order No. 955 dated 05.11.2013 "Procedurecarrying out emergency post-contact prevention of HIV infection among employees in the performance of professional duties".
- Order No. 59 dated 21.01.2014 On the approval and implementation of medical and technological documents on the standardization of medical care for family planning.
- Order No. 205 dated 03.24.14. Clinical protocol "Obstetric bleeding".
- Order No. 236 dated 02.04.2014 "Papproval and implementation of medical and technological documents on the standardization of medical care for dysplasia and cervical cancer".
- Order No. 319 dated 06.04.2016 "On the approval and implementation of

medical and technological documents on the standardization of medical care for genital endometriosis"

- Order No. 353 dated 04/13/2016 "On the approval and implementation of medical and technological documents on the standardization of medical care for abnormal uterine bleeding"
- Order No. 869 dated 05.05.2021 "On approval of the unified clinical protocol of primary, secondary (specialized), tertiary (highly specialized) medical care "Endometrial hyperplasia"

ELECTRONIC INFORMATION RESOURCES

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