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

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

THE METHODICAL RECOMMENDATIONS FOR PRACTICAL CLASS

International Faculty, Course VI

Discipline “Obstetrics and Gynecology”

Practical lesson №36. Topic: Placental dysfunction, hypotrophy of the fetus, fetal distress symptoms. Anomalies of development of fertilized ovum.

Approved:

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

Protocol No. 1 dated August 29, 2024.

Head of the Department, Doctor of Medicine, Professor _____ (I.Z. Gladchuk)

Developer:
Assistant professor of
obstetrics and gynecology department _____ (L.I. Berlinska)

Practical lesson № 36.

PLACENTAL DYSFUNCTION, HYPOTROPHY OF THE FETUS, FETAL DISTRESS SYMPTOMS. ANOMALIES OF DEVELOPMENT OF FERTILIZED OVUM.

Learning objective is to gain basic knowledge about placental dysfunction, fetal growth retardation, fetal distress and nomalies of fetal egg, be able to differentiate between certain signs and symptoms that can be common to both disease processes and to physiologic adaptations of pregnancy, obtain knowledge about methods of obstetrical examination, appropriate prenatal counseling and supervision in order to provide successful obstetric outcome

Basic concepts:

- definition, etiology and pathogenesis of placental dysfunction,
- classification of placental dysfunction,
- abnormalities of the ovum, risk pregnancy for abnormalities of the fetus,
- etiology and clinic polyhydramnios and oligohydramnios,
- methods of diagnosis and treatment of polyhydramnios and oligohydramnios

equipment

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

EDUCATIONAL TIME – 4 h

I. organizational stage

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

In recent years, among the causes of neonatal and infant mortality top ranks congenital abnormality of the fetus. In every 5th child registered pathology,

antenatal there, and 30% of the causes of various diseases or are the backdrop for their appearance.

Early diagnosis of congenital fetal pathology contributes to the birth of a healthy child.

Knowledge of modern methods of antenatal diagnosis of the fetus during uncomplicated pregnancy helps detect fetal pathology in the early stages of pregnancy.

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

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

Knowledge requirements:

- Communication and clinical examination skills.
- Ability to determine the list of required clinical, laboratory and instrumental studies and evaluate their results.
- Ability to make a preliminary and clinical diagnosis of the disease
- Ability to perform medical manipulations
- Ability to determine the tactics of physiological pregnancy, physiological labor and the postpartum period.
- Ability to keep medical records.

List of didactic units:

- Pelvis from anatomical and obstetric points of view.
- The dimensions of the fetal head and body.
- Signs of fetal maturity.

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

Questions:

To have specialized conceptual knowledge acquired in the learning process. To be able to solve complex problems and problems that arise in professional

activities.
Clear and unambiguous communication of own conclusions, knowledge and explanations to specialists and non-specialists.
To be responsible for making decisions in difficult conditions.
To have deep knowledge of the structure of professional activity.
To be able to carry out professional activities that require updating and integration of knowledge.
To be able to effectively form a communication strategy in professional activities.
To be responsible for professional development, ability to further professional training with a high level of autonomy.

Test tasks

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

1. The posterior rectus fascia (sheath) ends at the

(A) insertion of the rectus muscles

(B) insertion of the anterior rectus sheath

(C) arcuate line (semicircular line, linea semicircularis, line of Douglas)

(D) area approximately 3-4 cm below the umbilicus

(E) area approximately 2-3 cm above the pubic symphysis

2. Sacrospinous ligament

(A) a thick band of fibers filling the angle created by the pubic rami

(B) passes from the anterior superior iliac spine to the pubic tubercle

(C) triangular and extends from the lateral border of the sacrum to the ischial spine

(D) attaches to the crest of the ilium and the posterior iliac spines superiorly with an inferior attachment to the ischial tuberosity

(E) passes over the anterior surface of the sacrum

3. Sacrotuberous ligament

(A) a thick band of fibers filling the angle created by the pubic rami

(B) passes from the anterior superior iliac spine to the pubic tubercle

(C) triangular and extends from the lateral border of the sacrum to the ischial spine

(D) attaches to the crest of the ilium and the posterior iliac spines superiorly with an inferior attachment to the ischial tuberosity

(E) passes over the anterior surface of the sacrum

4. Ilioinguinal ligament

(A) a thick band of fibers filling the angle created by the pubic rami

(B) passes from the anterior superior iliac spine to the pubic tubercle

(C) triangular and extends from the lateral border of the sacrum to the ischial spine

(D) attaches to the crest of the ilium and the posterior iliac spines superiorly with an inferior attachment to the ischial tuberosity

(E) passes over the anterior surface of the sacrum

5. Arcuate ligament

(A) a thick band of fibers filling the angle created by the pubic rami

(B) passes from the anterior superior iliac spine to the pubic tubercle

(C) triangular and extends from the lateral border of the sacrum to the ischial spine

(D) attaches to the crest of the ilium and the posterior iliac spines superiorly with an inferior attachment to the ischial tuberosity

(E) passes over the anterior surface of the sacrum

6. Formed by the superior and inferior pubic rami and covered by a central membrane through which a nerve, artery, and vein pass

(A) obturator foramen

(B) greater sciatic foramen

(C) lesser sciatic foramen

(D) sacrospinous ligament

(E) sacral foramina

7. The internal pudendal vessels and pudendal nerve exit the pelvis but then reenter through this structure

(A) obturator foramen

(B) greater sciatic foramen

(C) lesser sciatic foramen

(D) sacrospinous ligament

(E) sacral foramina

8. Divides and demarcates the greater and lesser sciatic foramen

(A) obturator foramen

(B) greater sciatic foramen

(C) lesser sciatic foramen

(D) sacrospinous ligament

(E) sacral foramina

9. The piriformis muscle, gluteal vessels, and posterior femoral cutaneous nerves pass through this structure

(A) obturator foramen

(B) greater sciatic foramen

(C) lesser sciatic foramen

(D) sacrospinous ligament

(E) sacral foramina

10. Four anterior and four posterior openings through which pass small nerves

(A) obturator foramen

(B) greater sciatic foramen

(C) lesser sciatic foramen

(D) sacrospinous ligament

(E) sacral foramina

11. Which of the following statements is FALSE?

(A) The ischium has a body and two rami

(B) The internal surface of the body of the ischium provides attachments for the levator ani muscle and coccygeus muscle

(C) The superior ramus is located cephalad to the inferior ramus in the standing position

(D) The superior ramus forms the dorsolateral portion of the obturator canal

(E) The ischial tuberosity is the lowest portion of the pelvis in the erect or sitting posture and bears the weight of the human frame in the sitting position

12. Regarding the pubis, which of the following statements is FALSE?

(A) The pubis has a body and two rami

(B) The superior edge of the body of the pubis, lateral to the midline, has a raised area called the anterior iliac crest a common landmark

(C) The inferior ramus is the attachment of the adductor magnus and brevis, and obturator internus muscles

(D) The inferior rami form the lower portion of the pubic arch

(E) Inferiorly, the pubic bone is the attachment for the urogenital diaphragm

13. The sacrum

(A) is formed from 11 or 12 small fused vertebrae

(B) has an uppermost anterior portion called the obstetrical conjugate

(C) in women has a concave pelvic surface

(D) is separated from the vertebrae that make up the coccyx by the sacrococcygeal joint

(E) most often is the limiting factor in determining the size of the pelvic outlet

14. Which of the following is a muscle of the external genitalia?

(A) the gluteus

(B) the sartorius

(C) the superficial transverse perineal

(D) the deep transverse perineal

(E) the levator ani

15. The term pudenda includes the

(A) mons pubis

(B) vulva

(C) labia

(D) external genitalia

(E) all the above

16.The term perineum describes

(A) the entire area between the thighs from the symphysis to the coccyx, bounded inferiorly by the skin and superiorly by the levator muscles of the pelvic diaphragm

(B) the anus and perianal area

(C) the superficial skin layer of the vulva

(D) the tendon joining the muscles deep to the external genitalia

(E) bulbocavernosus, ischiocavernosus, and transverse perineal muscles as a complex

17. The clitoris

(A) consists of a single crurum, a short body, and the glans clitoris, with overlying skin called the prepuce

(B) is attached to the pubic bone by a suspensory ligament

(C) contains within the shaft the corpora cavernosa, a collection of dense connective tissue that serves as support for the anterior-inferior portion of the vagina

(D) is supplied very sparsely with nerves originating primarily from the terminal branch of the ilioinguinal nerve in most women

(E) plays a secondary role in erotic stimulation in most women when compared to the role of the vagina

18. Which of the following statements regarding the muscles of the external genitalia is TRUE?

(A) The bulbocavernosus muscle surrounds the distal vagina and vestibule on each side as a single continuous strip of muscle, much like other sphincters

(B) The ischiocavernosus muscle takes origin from the ischial tuberosity and inferior ischial ramus and inserts upon the inferior pubic ramus on each side of the pelvis

(C) The superficial transverse perineal muscle arises from the ischial tuberosity and inferior ischial ramus and inserts between the posterior vagina and anterior rectum

(D) The perineal body serves as a central connection for all the superficial muscles of the external genitalia except the transverse perineal muscle which inserts directly on the external anal sphincter

(E) The muscles of the external genitalia are usually spared at the time of episiotomy when the levator ani muscle is routinely divided

19. Which of the following statements about the vagina is FALSE?

(A) The vagina is a 7-10 cm canal connecting the internal and external genitalia from the vestibule to the uterine cervix

(B) It is a hollow, distensible, fibromuscular tube with the apex (vault) having an H-shaped lumen and the external opening being flattened in the dorsal-ventral dimension

(C) The body of the vaginal tube is flattened in its normal resting state

(D) The mid-portion of the vaginal axis is nearly perpendicular to the lower sacrum in the adult human female in a standing position

(E) The posterior fornix (back wall of the vagina) is approximately 2 cm longer than the front wall and is directly connected to the peritoneal pouch (posterior cul de sac, retrouterine space, or pouch of Douglas) directly behind the uterus

20. When the infantile uterus is examined, one finds that

(A) the cervix is larger than the corpus (body of the uterus)

(B) the position is always anteflexed

(C) the cervix is the same size as the corpus

(D) the body is larger than the cervix

(E) it is as large as the adult organ in the immediate newborn period

21. The portio vaginalis of the cervix is that part which

(A) extends cephalad from the vagina

(B) protrudes into the vagina

(C) forms an internal isthmus

(D) is normally covered with endocervical epithelium

(E) all the above

22. Which of the following statements regarding the uterus is FALSE?

(A) The uterus has a body (corpus), composed mainly of smooth muscle, and a cervix, composed mainly of connective and elastic tissues, that are joined by a transitional portion (isthmus)

(B) It is an estrogen-dependent organ measuring about 7.5 cm long by 5 cm in width, and 4 cm anterior to posterior diameter in an adult female

(C) After puberty the uterus weighs about 50 grams in the nullipara and 70 grams in the multipara

(D) It lies between the bladder anteriorly and the pouch of Douglas in front of the rectum posteriorly, with the cervical portion extending into the abdomen and into the vagina

(E) The opening at the distal tip of the cervix is called the internal os

23. The uterus and adnexa are normally mobile structures, but they do have some relatively fixed anatomic characteristics. Which, if any, of the following statements about their relationship and/or positions is FALSE?

(A) Anteflexion means that the uterus is bent forward on itself

(B) The ovaries can be normally found caudad to the cervix

(C) The round ligaments are normally attached to the uterus anterior to the insertion of the fallopian tubes

(D) Adnexa refers to the tube, ovary, and their connecting structures

(E) All statements are true

24. Regarding the anatomy of the fallopian tube, which of the following statements is FALSE?

(A) Fallopian tubes are a conduit from the peritoneal to the uterine cavity

(B) Each fallopian tube traverses the superior portion of the broad ligament attached by a mesentery (mesosalpinx)

(C) The fallopian tube has four distinct areas in its 8-12 cm length: the portion that runs through the uterine wall (interstitial or cornual portion), the part immediately adjacent to the uterus (isthmic portion), the mid-portion of the tube (ampulla), and the distal portion containing the finger-like fimbria that expels the ovum (infundibular portion) to begin its passage toward the ovary

(D) The longest of the fimbriae (fimbria ovarica) is attached to the ovary

(E) Each tube is covered by peritoneum and consists of three layers: serosa, muscularis, and a nonciliated mucosa

25. Which of the following statements about the ovary is FALSE?

(A) The ovaries normally change in size through-out a woman's lifetime

(B) The ovary is supported in its normal anatomic position by the infundibulopelvic ligament and the ovarian ligament

(C) The ovary produces both hormones and germ cells

(D) The ovary lies in the ovarian fossa of the true pelvis, overlying the iliac vessels

(E) The ovary produces the estrogens and androgens that regulate sexual desire in the human female

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

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

Interactive task:

Students of the group are divided into 3 subgroups of 3-4 people each. They work in the classroom, reception department of the maternity hospital, labor & delivery ward, neonatal department with pregnants and newborns.

Tasks:

- Subgroup I – play situational tasks as patients

– Subgroup II – play situational tasks as doctors

– Subgroup III – to assess answers of subgroups I and II and makes adjustments.

Tests:

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

1. On receiving antenatal appealed pershovahitna 30 years. The gestational age according to the latest monthly 20 weeks. From history revealed that she suffered from high fever SARS in early pregnancy and took treatment (antibiotics, antipyretic drugs). When screening ultrasound diagnosed with microcephaly. Identify tactics.

+ A. Abortion.

B. follow-up, ultrasound control after 1 month.

C. Hold amniocentesis.

D. It is necessary to do a biopsy of the placenta.

E. Run kordotsentez.

2. Pershorodillya 20 years ba¬hatovoddyam is in labor with hours. Maternity active activities. One fruit, in the main presentation. The heartbeat of the fetus does not suffer. Roz¬kryttya cervix 4 cm. The bag of water out intense contractions. Determine the tactics of delivery:

A. prostahlan¬dynamy induce labor.

V. expectant management.

C. Caesarean section.

B. The dream vacation.

+ E. Amniotomy.

3. Normally the number of amniotic waters at full-term pregnancy:

AA + 600-1500 ml.

B. 500-600 ml.

C. 1600-2000 ml.

D. 2000-2300 ml.

E. 2000-2500 ml.

4. Number of amniotic waters at Polyhydramnios:

A. 600-1500 ml.

B. 500-600 ml.

+ C. More than 1500 ml.

D. More than 2,000 ml.

E. More than 2500 ml.

5. Possible cause polyhydramnios:

A. Chronic infection

B. Diabetes

C. Rhesus conflict

D. fetal malformations

+ E. all mentioned.

6. The main complaint of pregnant women with acute polyhydramnios:

A. Loss of appetite.

B. Dyspnea.

C. ailments.

D. The feeling of heaviness and pain in the abdomen and lower back.

+ E. all mentioned.

7. The main diagnostic criteria for Polyhydramnios:

A. Pale skin, increased venous drawing on his stomach.

B. bypass the stomach and the height of standing uterus more pregnancy.

C. uterus spherical shape.

D. unstable fetal position, fetal parts palpable with difficulty or not defined.

+ E. all mentioned.

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

Placental dysfunction (PD) – a clinical syndrome, caused by morphological and functional changes in the placenta and its infringement of the compensatory-adaptive possibilities. The reasons for placental dysfunction can be infringements of maturing and the formation of the placenta in women with pathologies of the endometrium, ovary-hypophysis and adrenal glands disorders, previous abortions and miscarriages. Pre-eclampsia, risk of miscarriage, overdue pregnancy, iso-serological blood incompatibility of the mother and fetus, genital infantility and other extra-genital pathologies (dysfunction of the adrenal glands, diabetes, thyrotoxicosis, etc.). play a great role in the occurrence of placental dysfunction, Thus, a complex of transport, trophic, endocrine and metabolic disorders of the placenta can occur, which is the basis for pathology of the fetus and newborn. The degree and character of influence of the pathological condition of the pregnant woman on the fetus depends upon many factors: the term of the pregnancy, the length of influence, condition of compensatory-adaptive mechanisms in the "mother-placenta-fetus" system.

Classification of PD:

I. by the clinical-morphological signs:

a) primary (early) placental insufficiency (before 16 weeks) occurs during the formation of the placenta during implantation, early embryogenesis and placentation under the influence of genetic, endocrine, infectious and other factors. Enzyme insufficiency of the decidual tissue (during dysfunction of the ovaries, anatomical structural disorders, disorders in the location of the placenta attachment, and also defects of vascularization and the problems in the maturing of the chorion) play a valuable role in the development of primary placental dysfunction. Primary insufficiency can assist in the development of congenital disorders of the fetus, stillborn pregnancy. Clinically, it appears as risk of miscarriage in early terms. On occasion, primary placental dysfunction can develop into secondary.

b) secondary (late) placental dysfunction, as a rule, occurs in the late terms of pregnancy, after 16 weeks, under the influence of different maternal factors.

II. by the clinical course:

a) acute – acute disturbances of decidual perfusion and disturbances of the utero-placental blood circulation play a leading role in its development. This kind of placental dysfunction appears as large infarctions of the placenta, preterm detachment of a normally located placenta. As a result, death of the fetus and the termination of the pregnancy can occur quickly.

b) chronic – very frequent pathology (it is observed in approximately every third pregnancy woman in the group of high risk). It can occur in the II trimester and last for a long time.

III. by the condition of the compensatory-adaptive reactions:

a) relative – when the compensatory reactions in the placenta are preserved. Vital support of the fetus is caused by compensatory reactions, which operate on the tissue (increase the number of reabsorbing villa, capillaries of terminal villa, functioning syncytial nodes), cellular and subcellular levels of the syncytiotrophoblast. Infringements of maturing of the placenta and immune disorders have certain value in the development of this type of PD.

b) absolute - most difficult form of chronic PD. It is characterized by the development of damage to the placenta of involution-dystrophic, circulatory and inflammatory character, which is accompanied by the absence of compensatory-adaptive reactions of the chorion at the tissue level.

Diagnostics of disorders of the functions of the placenta.

1. Determine the degree and character of changes in the placenta. \

a) hormonal researches:

Hormonal methods of diagnostics of PD consist of determining the level of hormones in the amniotic fluid, patient's blood and urine. But, it cannot be limited to the research of one hormone only one time. It is advisable to use dynamic supervision of a complex of hormones in the placental complex, placental lactogen (PL) and chorionic gonadotropin (CG) – to diagnose the condition of the syncytiotrophoblast of the placenta; estrogen (estradiol-E2 and estriol-E3) – to evaluate the function of the placental complex; progesterone (Pg)-to diagnose the condition of the uterine-placental-fetal system (see table 1).

2. Determine the condition of the fetus and placental system.

a) measure the height of the uterine fundus over the pubis symphysis and the circumference of the abdomen in dynamics.

Special attention should be paid during external measurement in the II and beginning of the III trimester when the received sizes are comparison to the term of the pregnancy, which shows any fetal growth retardation. It is convenient to use a gravidogram, where normal measurements of the height of the uterus fundus are marked. The lack of 20 mm in the size of the uterus or more at 32-33 weeks is basis for considering the presence of hypotrophy of the fetus.

b) determine the sizes of the fetus with an ultrasound.

c) study the respiratory activity of the fetus with an ultrasound.

d) determine the movement activity of the fetus with an ultrasound.

It is performed at 7-8 weeks of pregnancy, but its evaluation has the greatest value in the III trimester when the fetus does 5 and more movements in 30 minutes. Thus, an increase in general movement activity of the fetus is considered compensatory reactions, a decrease - an adverse sign.

e) ultrasound of the urinary functions of the kidneys of the fetus by the amount of excreted urine.

The latter is determined by the difference between the volume of the urinary bladder during the first US and the repeated US in 1 hour. The given test is especially valuable when diagnosing hypotrophy of the fetus, during which the excretion of the urine decreases to 15-18 ml (normal – 24-27 ml). Also consider, that a decrease in the speed of urine excretion of the fetus is observed during gestosis of the pregnant women, in those cases there is no growth retardation by data from the US. The degree of decrease in the production of urine is directly dependant on the severity of gestosis, which is connected not only to fetal growth retardation, but also to the infringement in the regulation of the kidney functions.

f) evaluation of the fetal heart activity.

Along with auscultation, the most accessible and widespread method of evaluating the fetal heart activity is cardiotocography, registration of fetal heart rate (HR). Cardiomonitoring shows initial and expressed signs of suffering of the fetus as a result of fetal distress.

The basic treatment for placental dysfunction:

1) Improving the uterine-placental blood circulation;

2) Normalizing the gas exchange between the mother and fetus;

3) Improving the metabolic functions of the placenta;

4) Acting on the fetus, through the placenta and using the para-placental way of exchange.

Different methods and different means influence multiple functions of the placenta at once. Normalizing the uterine-placental blood flow, certainly, improves the transport of nutrients and gas exchange, which is an important factor in the synthesis of hormones. Correcting the metabolic changes leads to the improvement of gas exchange and normal function of the placenta which in turn, improves the haemodynamics of the placenta.

Normalizing the uterine-placental blood flow is the basic link in normalizing the function of the placenta; it is achieved by using vasodilating means or preparations which relax the uterus, along with actions directed on normalizing the reocoagulate properties of the blood:

a) physical methods of action (electro-relaxation of the uterus, electrophoresis of magnesium, thermal procedures on the renal area, diathermy, inductothermy, etc.) reflex the biometry and lead to the dilation of vessels;

b) abdominal decompression removes extra muscle work of the uterus by overcoming of the tonus of the abdominal muscles. It leads to an increase in blood flow in the uterus and improves placental perfusion. Besides that, it leads to an increase in the synthesis of estriol and an increase in the transport function of the placenta;

c) hyperbaric oxygenation is applied to improve the function of the placenta and fetal condition, especially in pregnant women heart disorders. It preserves the activity of the respiratory enzymes, assists in normalizing the carbohydrate metabolis;

d) medicament means. Aminophylline or teophylline, vasodilating substances, are used; they can be introduced by i\v by stream or droplet introduction. Complamin, teonicole are used for the same purposes. It should be noted that hypersensibility is possible in pregnant woman and so individual doses of complamin should be selected. Considerable improvement in the uterine-placental blood circulation causes vaso-active preparation trental. It has vasodilating action, decreases the resistance of peripheral vessels, increases the collateral blood circulation. The preparation improves the rheological properties of blood and microcirculation, and it can be used in hospitals and female consultations.

Example of treatment plan:

I. In the hospital:

Treatment of the basic pathology of the pregnancy;

Oxygen therapy - inhalation of mixed oxygen for 30-60 minutes 2 times per day;

Preparations which influence metabolism: glutamic acid 1,0 gr. x 3 times a day, methionine 0,25-0,5 gr x 3 times a day.

Galaxorbin as ferroplex 1 tab. x 3 times a day.

Cocarboxilase 50 mg i\m every day.

Vaso-active substances: trental, partusisten, isadrin, aminophylline i\v or per os (i\v with glucose or physiological solution). I\v introduction + 3x per os (in pills). Course of the vaso-active substances is 4-6 weeks, of them 5-7 days – infusion therapy, and the other days – per os. Complamin (teonicole) 0,15 gr. per os with food 3 times a day can be used as vaso-active substances.

Reopolyglucin 10 % solution 400-500мл every day i\v droplets, 3-4 times, or 2-3 times a week (it can be used as a loading liquid before introducing vaso-active substances).

Native plasma – 150 ml i\v droplets for low protein in the blood (below 6%).

When introducing large doses of glucose it is used with insulin - 1 unit for 4 gr. of dry substance.

II. In the female consultation:

Diathermy at the renal area – up to 10 sessions alternating with ultraviolet irradiation (10 sessions).

Diet rich in fiber and vitamins (boiled meat, fish, cheese);

I\v introduction of glucose 40% - 20,0 with corglicon 0,06% - 0,5 ml gradually every day or every other day (10 injections);

Cocarboxilase i\m 50 mg every day, for 10-14 days;

Aminophylline 0,15 gr per os 2 times a day and 0,2 gr suppositories at night, for 14 days (or no-shpa, papaverin);

Trental 1 pill 3 times a day or isadrin 0,005 gr (under tongue) 3 times a day in combination with finoptin (isoptin);

Orotate potassium 0,5 gr 3 times a day;

Ferroplex (conferon) 1 dragee (capsule) 3 time a day;

Methionine 0,5 gr 3 times a day;

Ascorutin 1 pill 3 times a day.

If not effective during 2 weeks – hospitalization

Prevention of placental dysfunction

1) eliminating the influence of harmful factors during the period before conception and especially during the first days and weeks of pregnancy:

a) eliminating smoking, alcohol, taking of medicines (without prescription from the doctor);

b) before pregnancy (and during pregnancy) sanation of sites of infection, treatment of chronic diseases.

2) after the patient becomes pregnant, it is necessary to explain to her the role of high-grade balanced food, high-grade and extra sleep.

3) finding the group of high risks and registering them for regular medical check-ups.

Fetal distress syndrome

According to order of the Ministry of Health of Ukraine №900 from 27.12.2006 about the statement of the clinical report about obstetrical help for "Fetal distress during pregnancy and during birth ", the terms "chronic hypoxia of the fetus ", "acute hypoxia " are not clinical, because for the diagnostics of these disorders, indicators of oxygen contents in the fetus (metabolic acidosis) are not used in routine medical practice. So, all disorders of the functional condition of the fetus at the present are distinguished as "fetal distress". The concept "chronic fetal hypoxia", "acute fetal hypoxia" are not used.

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Respiratory distress syndrome in newborns (respiratory disorder syndrome) – non-infectious pathological processes (primary atelectasis, disease of the hyaline membrane, hydropic- hemorrhagic syndrome) that form in the prenatal and early neonatal periods of development of an infant and breathing; it appears as respiratory disorders.

Fetal distress syndrome means hypoxia.

Hypoxia of the fetus - insufficient supply of oxygen to the tissue and organs or their incomplete digestion of the oxygen. This term was recommended by the World Health Organization, but it is not the only one: the terms fetal distress ("suffering") and asphyxia (without pulse; but has dyspnea, i.e. a lack of oxygen and accumulation of carbonic gas in the organism) also exist. The term hypoxia of the fetus and asphyxia of newborns are not used.

The consequences of oxygen insufficiency for a fetus during different periods of pregnancy are different. In early terms (before 16 weeks), when organs and systems are forming, expressed hypoxia can be accompanied by embryo growth delay and the occurrence of development anomalies. Oxygen starvation in later pregnancy terms can lead to fetal growth retardation, defects of the central nervous system in the fetus and newborns, infringement of the processes of the infant's adaptation after birth; in special cases it can be the reason for stillborn deliveries or death in infants.

Depending on the duration, chronic and acute fetal distress is distinguished. Chronic distress develops when there is an insufficient supply of oxygen to the fetus throughout a long period of time due to diseases of the mother's internal organs (diabetes, chronic diseases of the lungs, kidneys, anemia, etc.), complicated course of the pregnancy (gestosis, risk of miscarriage, over-due pregnancy, immunological incompatibility of the mother and fetus blood by Rhesus factor, pre-natal fetal infection). Chronic distress also can be the result of smoking, use of alcohol, drugs during pregnancy. Acute fetal distress, as a rule, occurs during the delivery (in connection with anomalies of labor activity, entanglement of the umbilical cord, prolapse or compression of loops of the umbilical cord, short umbilical cord). Less often, acute fetal distress is observed during the pregnancy during life-threatening conditions of the mother (premature detachment of the placenta, rupture of the uterus). Sometimes, chronic and acute distress is observed together.

Anomalies of fetal egg.

Causes of congenital malformations and fetal diseases are numerous, varied in nature. By etiological basis distinguish three types of defects: a) hereditary, or endogenous (gene mutations, chromosomal aberrations, endocrine disease,

"perezrivannya" gametes, age of parents); b) exogenous (physical factors - radiation, mechanical, chemical - pharmaceuticals, household chemicals, hypoxia, malnutrition, biological - viruses, mycoplasma, protozoan infections izoimunizatsiya); c) multifactorial (due to the combined influence of genetic and exogenous factors). Anomalies of fetal development can occur in different periods of ontogeny. Depending on the time of action of harmful factors and therefore destruction facility entails the following form defects: - hametopatiyi and blastopatiyi - due to changes in the genetic apparatus may also arise in the process of maturing germ cells during fertilization or in the early stages of crushing fertilized cell (the first 15 days); pregnancy mainly suspended in 3-4 weeks after the injury or death of the embryo; - Embriopatiyi - arising in the period from the 16th day after the 10th week after fertilization; During this period the formation of germs all important organs (organogenesis) process is enhanced differentiation of cells and tissues; embryo is extremely sensitive to the action of damaging factors; pregnancy often ends in spontaneous abortion, birth of a child with a deformity or stillbirth; - Fetopatiyi - diseases and functional disorders that occur in the fetus under the influence of exogenous factors during the 11 th week of pregnancy and birth. By congenital developmental disorders include the following: - agenesis - the complete absence of authority; - Aplasia - the lack of organ availability of its vascular legs; - Hypoplasia - underdevelopment of the body; - Malnutrition - body weight reduction; - Hypertrophy - increasing body weight; - Macrosomia - increasing the length and weight of the fetus; - Heterotypiya - the presence of cells or tissues in the body to another organ where they should not be; - Ectopia - shift authority; - Atresia - lack of channels or holes; - Stenosis - narrowing the channel or hole; - Nerozdilennya (merger) of: twins, are not divided, called pahamy to this title add Latin term which means confluence (torakopahy, kraniopahy); nerozdilennya limbs or their parts - webbing; - Dyshroniya - violation of the pace of development. Classification of congenital malformations (WHO, 1995): - congenital malformation of organs and systems: central nervous system and sense organs; face and neck; cardiovascular system; respiratory system; the digestive system; musculoskeletal system; urinary system; genitals; endocrine glands; skin and its appendages; litter; other defects; - Multiple congenital malformations, chromosomal syndromes; genetic syndromes; syndromes caused by exogenous factors; syndromes of unknown etiology; Multiple unspecified flaws. There are also isolated (localized in one organ), system (within the same organ systems) and multiple (in the bodies of two more) flaws. Malformations of CNS Hydrocephalus is characterized by obstruction to one of the sections of the circulation of cerebrospinal fluid. Hydrocephalus consists mainly of water supply stenosis brain open hydrocephalus (ventricular enlargement pidpavutynnoyi subarachnoid brain and of the brain due to obstruction of the outflow tract system pozashlunochkovoyi CSF), Dandy-Walker syndrome (a combination of hydrocephalus, posterior fossa cyst, cerebellar defects worm, cyst of 'yednuyetsya of the ventricular cavity IV). Vascular plexus papilloma

- neoplasms, which is localized at the lateral ventricles vestibule. It is presented villous tissue, histologically similar to tissue intact vascular plexus has a benign course and is usually combined with hydrocephalus. Vascular plexus papillomas diagnosed using CT or neurosonography.

Neural tube defects. This term unite anencephaly, tsefalotsele and spina bifida. Spina bifida - a defect median dorsal vertebral arches, accompanied by "exposing" the contents of the spinal canal. Spina bifida can be part of genetic syndromes (with isolated mutant) or chromosomal abnormalities (trisomy 13 th and 18 th pairs of chromosomes, tryployidiya, unbalanced translocation chromosome or ring), the result of the fetus teratogenic factors during organogenesis. There cystic form of spinal hernia formation of the hernia sac containing the lining of the brain and / or substance of the brain and hidden form that is not accompanied by the formation of hernia protrusion. Spinal hernia often associated with hydrocephalus, congenital heart defects and urinary and reproductive systems. Prognosis depends on the level and extent of lesion, presence of associated anomalies. Survival of children who received treatment in the early neonatal period not exceeding 40%, and 25% of them are paralyzed. In case of pathology and the presence of non-viable fetus displayed abortion. Indications for early abortion is a rapid increase ventrykulomehaliyi and makrokraniyi. Anencephaly - the absence of the cerebral hemispheres and most of the cranial vault, accompanied by a defect in the frontal bone above the supraorbitalnoyi (nadochnoyamkovoyi) areas, the lack of temporal and occipital bones. The upper part of the head covered with a vascular membrane. Structures medium and intermediate brain is partially or completely destroyed. Pituitary and diamond-shaped hole primarily saved. Typical manifestations could be considered bulging eyes, large tongue, a short neck. Risk factors include maternal diabetes. In animal experiments found TERATOGENICITY ionizing radiation, salicylates, sulfanilamides, increased carbon dioxide in the blood. Sonographic diagnosis can be established as early as 12-13 weeks of pregnancy. Among the fruits of this disease 32% are born alive. When intrauterine diagnosis of anencephaly abortion displayed in any of its term.

Tsefalotsele (splitting the skull) - bulging cranium content through bone defect. The term "cranial meninhotsele" refers bulging through the defect only meninges. The presence of the hernia sac brain tissue denoted by the term "encephaloceles." Tsefalotsele - a rare pathology and is a component of many syndromes - genetic syndrome (Meckel syndrome, median clefts face) and non-genetic (amniotic constriction). Prognosis depends on the presence of brain tissue in the hernia sac and related hydro- or microcephaly. The displayed abortion at any stage.

Microcephaly (mikroencefaliya) - a clinical syndrome, characterized by reducing the circumference of the head and mental retardation. The incidence of - 1.6 per 1 000 live births. Microcephaly is polyetiological disease, the development of which

play an important role genetic (chromosomal aberrations, monogenic defects) and environmental factors. Prognosis depends on the presence of combined anomalies. Trisomy 13 th and 18 th chromosome syndrome and Meckel belong to fatal injuries. In the absence of associated anomalies prognosis depends on the size of the head: the lower it is, the lower the index of intellectual development. Microcephaly - an incurable disease. Obstetric tactics - abortion.

Prenatal screening methods make it possible to detect neural tube defects and other abnormalities in the fetus (Down syndrome, and others.) At 15-20 weeks of pregnancy. These methods include: - Ultrasound; - Determination of AFP in serum of pregnant: increased AFP over 95-98 percentile, the median value of 2-2.5 evidence of increased risk of neural tube defect, omphalocele, congenital nephrosis, Gastroschisis, gastrointestinal atresia value of AFP in amniotic fluid; atsetylholinesteraztraktu availability, etc .; performed to confirm the diagnosis ultrasound, amniocentesis for vyy vznachennya ACE levels in amniotic fluid; the presence of acetylcholinesterase in amniotic fluid confirms the diagnosis of neural tube defects; reduction in AFP indicates Down syndrome. Anomalies of sex chromosomes Turner's syndrome (monosomy X or 45, X0) - barren woman of low stature with normal mental development. Klinefelter syndrome (47, XXY) - tall infertile men with slightly reduced intelligence and hypoplasia of the testes. Syndrome fragile X chromosome - inherited mental retardation in males caused by mutations in the FMR1 gene, resulting in him is hipermetyluvannya and inactivation. Hereditary diseases Hereditary diseases - genetically caused disease inherited in an autosomal dominant or autosomal recessive and sex-linked. Cystic fibrosis - a disease inherited by autosomnoretsesyvnym type, is caused by a mutation of a gene located on the long arm of chromosome 7. Diagnostics is conducting DNA analysis. Hemoglobin (anemia and thalassemia serpopodibnoklitynna) is inherited in an autosomal recessive pattern. Diagnosis is carrying out DNA analysis and biopsy of chorionic villi. Medical and genetic counseling Indications for medical genetic counseling: - the presence of congenital malformations or hereditary disease in spouses or close relatives; - Having children with birth defects or hereditary diseases; - The presence of families of mentally disabled persons; - Marriage between close relatives; - Sterility or habitual; - Amenorrhea; - Perinatal mortality; - The impact of teratogenic and mutagenic factors on parents; - Complicated pregnancy.

Methods of prenatal diagnosis

Amniocentesis - obtaining by transabdominal amniotic fluid containing fetal fibroblasts (performed at 15-17 weeks gestation).

Biopsy of chorionic villi - transabdominal (if the placenta is located on the front wall of the uterus) or Transcervical (when the placenta is on the back wall of the uterus) aspiration of chorionic villi (performed in pregnancy week 12/19).

Kordotsentez - transabdominal taking blood from the umbilical cord (performed after 20 weeks of pregnancy) for rapid analysis of karyotype in cases where ultrasound was found abnormalities of the fetus.

Fetal skin biopsy (mostly skin from the back) used to identify severe hereditary skin diseases (congenital ichthyosis, Epidermolysis bullosa, hyperkeratosis, etc.).

Laboratory methods

Cytogenetic studies - the study of fetal cells obtained by different methods. Allows you to determine abnormalities in chromosome number. DNA analysis - using fetal cell DNA for PCR (congenital toxoplasmosis, cytomegalovirus infection), hybridization reaction (cystic fibrosis, anemia serpopodibnoklitynna), genetic linkage analysis (fragile X syndrome chromosome). Biochemical analysis is used to identify mucopolysaccharidoses, congenital hypoplasia of the adrenal cortex. Determination of fetal cells in maternal blood flow - allocation nuclear red blood cells and fetal trophoblast cells with further genetic analysis. Fluorescent hybridization in situ - analysis of interphase cells for cytogenetic studies. Preimplantation genetic diagnosis - a method of embryo biopsy followed by molecular genetic analysis using PCR. Three-dimensional ultrasound - a three-dimensional reconstruction of the fetal body using specialized ultrasonic devices. Fetal MRI carried out after the detection of fetal malformations with ultrasound.

Anomalies umbilical cord anomalies of the heart are wrong vascular development (single umbilical artery, umbilical artery third, aneurysms, abnormal anastomoses, arterial units etc.), Changing the length of the cord (excessively long and short), education and real psevdovuzliv cord. In addition, possible pathological (boundary and shell) attachment cord. There are absolutely and relatively short umbilical cord. Absolutely short umbilical cord consider cord length of 40 cm. The relatively short umbilical cord umbilical cord called normal length, but shortened as a result of entanglement around the fetus. Absolutely short umbilical cord can cause irregular provisions fetal slowdown promote fetal birth canal or placental abruption due to its tension. Possible break the umbilical cord with her bleeding vessels. Diagnostics short umbilical cord during pregnancy is difficult. When ultrasound can be suspected shortening the cord if it detect entanglement around the neck and torso of the fetus. Suspect quite short umbilical cord at birth can be based on characteristics such as slow movement of the head of the fetus during the eviction, changing its cardiac activity. Excessively long cord (70-80 cm or more) is a common anomaly. Among the dangerous complications for the fetus with the umbilical cord isolated long loss of loops at the time of rupture of membranes when moving the head of the fetus. The true knot of the umbilical cord is formed in the early stages of pregnancy when the fetus small size enable it to slip through the loop cord. During this delay units (during pregnancy or childbirth) can be acute fetal hypoxia, until his death. Psevdovuzly cord that limited its thickening due to varicose veins or umbilical

cluster vartonovyh jelly, have no practical significance. Pathological cord attachment and the boundary is enveloped. In the second case, the umbilical cord is attached to the shell at some distance from the edge of the placenta. The vessels of the umbilical cord while the placenta directed by shells. Rupture of blood vessels in shell attachment cord often occurs as a result of rupture of membranes. And often there comes the sudden death of the fetus.

There placenta abnormalities increase the weight of the placenta (syphilis, immunological conflict, etc.) And violation of its shape, resulting from degenerative changes in the endometrium. Most noted placenta with additional slices (placenta succenturiata), located at some distance from the edge of the placenta and connected with her vessels. Additional particles can stay in the womb, so you need to check the integrity of the litter and the lack of a cliff vessels. Identify and placenta of the two particles (placenta bipartiata), vikonchastu (placenta fenestrata) - placenta with areas of dramatic thinning, hulled (placenta membranacea) - extensive, but very thin. Other forms of violations of the placenta is referred bobopodibnu, horseshoe, poyasopodibnu (placenta zonaria) placenta.

Oligohydramnios and polyhydramnios

Oligohydramnios (oligohydramnion) - a condition where the amount of amniotic fluid is less than 0.5 liters. It is caused by a decrease in the secretory function of amniotic epithelial renal agenesis fetal polycystic kidneys or delayed fetal development. Oligohydramnios affect the course of pregnancy and childbirth, often watching miscarriage, painful sensation during fetal movements, prolonged labor, slow opening of the cervix, sometimes - normally attached premature detachment of the placenta. In addition, it affects the fetus, fetal movements are limited, delayed its development, sometimes watching curvature of the spine, fusion between fetal skin and amnion (symonartovi threads synechia, mooring), which causes involuntary limb amputation or distortion. There oligohydramnios due to damage membranes (traumatic, secondary) - amniotic hidroreyu.

Polyhydramnios (polihydramnion) - excessive accumulation of amniotic fluid - more than 1.5 liters. Etiology: by the mother infection (viral) disease, diabetes; from the placenta and amnion: excessive production or slow absorption of amniotic fluid amniotic epithelium horionanhioma, arteriovenous fistula; of the fetus, multiple pregnancy (during transfusion syndrome fetofetalnoyi monohorialnomu type placentation), idiomatic polyhydramnios, strahovodu atresia, traheostravohidna fistula, duodenal atresia, neuromuscular pathology (swallowing difficulties), anencephaly. Acute polyhydramnios develops very quickly, chronic - slow. The clinical picture. A significant increase in the size of the uterus (abdominal perimeter over 120 cm), shortness of breath due to the high standing of the diaphragm; malposition; premature birth. Complications of childbirth: the weakness of labor activity due to hyperextension of the uterus; poured premature amniotic fluid, which

may be accompanied by deposition of small parts of the fetus, premature detachment of the placenta; PLAYBACK hypotonic bleeding and early postpartum period. Treatment. Amniocentesis is the removal of excessive amounts of amniotic fluid; normalization of plasma glucose pregnant; laser coagulation of placental anastomoses (at fetofetalniy transfusion); the use of antibiotic therapy, unfortunately, ineffective. The main thing - is prevention of complications, timely amniotomy slow the emission of amniotic fluid; strengthening labor, if it is weak; prevention hypotonic bleeding. It is often accompanied by polyhydramnios fetal anomalies (anencephaly, wolf mouth, ectopic bladder, etc.), so you need to carefully examine Polyhydramnios fruit for the defects and the need for timely abortion.

3.3. Requirements for the results of work.

1. Define the concept of "anomalies ovum."

2. Methods of diagnosis of abnormalities in the fertilized egg.

3. Define the term "polyhydramnios" and "oligohydramnios".

4. What is the frequency polyhydramnios?

5. What is the clinical diagnosis and polyhydramnios and oligohydramnios?

6. Prenatal care and delivery at Polyhydramnios.

7. What factors cause the formation of a primary placental dysfunction?

8. What factors cause the formation of secondary placental dysfunction?

9. What are the clinical manifestations of placental dysfunction?

10. What are the diagnostic methods used to identify placental dysfunction?

11. What tactics of pregnancy and childbirth in placental dysfunction?

12. What factors cause the SORP?

13. What are the diagnostic methods used to identify the SORP?

14. What tactics of pregnancy and childbirth in SORP?

15. What are the clinical manifestations of hemolytic disease of newborns?

15. What are the clinical manifestations of hemorrhagic disease of the newborn?

16. What are the clinical manifestations of neonatal sepsis?

17. What methods of neonatal resuscitation are used?

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

Tests

1. On receiving antenatal appealed pershovahitna 30 years. The gestational age according to the latest monthly 20 weeks. From history revealed that she suffered from high fever SARS in early pregnancy and took treatment (antibiotics, antipyretic drugs). When screening ultrasound diagnosed with microcephaly. Identify tactics.

+ A. Abortion.

B. follow-up, ultrasound control after 1 month.

C. Hold amniocentesis.

D. It is necessary to do a biopsy of the placenta.

E. Run kordotsentez.

2. Pershorodillya 20 years ba¬hatovoddyam is in labor with hours. Maternity active activities. One fruit, in the main presentation. The heartbeat of the fetus does not suffer. Roz¬kryttya cervix 4 cm. The bag of water out intense contractions. Determine the tactics of delivery:

A. prostahlan¬dynamy induce labor.

V. expectant management.

C. Caesarean section.

B. The dream vacation.

+ E. Amniotomy.

3. Normally the number of amniotic waters at full-term pregnancy:

A + 600-1500 ml.

B. 500-600 ml.

C. 1600-2000 ml.

D. 2000-2300 ml.

E. 2000-2500 ml.

4. Number of amniotic waters at Polyhydramnios:

A. 600-1500 ml.

B. 500-600 ml.

+ C. More than 1500 ml.

D. More than 2,000 ml.

E. More than 2500 ml.

5. Possible cause polyhydramnios:

A. Chronic infection

B. Diabetes

C. Rhesus conflict

D. fetal malformations

+ E. all mentioned.

6. The main complaint of pregnant women with acute polyhydramnios:

A. Loss of appetite.

B. Dyspnea.

C. ailments.

D. The feeling of heaviness and pain in the abdomen and lower back.

+ E. all mentioned.

7. The main diagnostic criteria for Polyhydramnios:

A. Pale skin, increased venous drawing on his stomach.

B. bypass the stomach and the height of standing uterus more pregnancy.

C. uterus spherical shape.

D. unstable fetal position, fetal parts palpable with difficulty or not defined.

+ E. all mentioned.

IV. Summing up

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

Criteria for current assessment on the practical lesson:

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

Recommended literature

Basic:

1.Zaporozhan V.M., Mishchenko V.P. Obstetrics and gynaecology in 2 Books : Book 1 : Obstetrics, 2007. – 373 pp.

2.Williams Manual of Obstetrics (24th Ed) F. G. Cunningham, K. J. Leveno, S. L. Bloom, C. Y. Spong, J. S. Dashe, B. L. Hoffman, B. M. Casey, J. S. Sheffield, McGraw-Hill Education/Medical. – 2014. – 1377 pp.

3.Textbook of Gynecology (6th Ed) Dutta DC., Hiralal Konar (Ed.). – JAYPEE BROTHERS MEDICAL PUBLISHERS (P) LTD, 2013. – 702 pp.

4.DC Duttas Textbook of Obstetrics including Perinatology and Contraception (8th Ed.) Dutta DC., Hiralal Konar (Ed.). – JAYPEE BROTHERS MEDICAL PUBLISHERS (P) LTD, 2015. – 782 pp.

5.Llewellyn-Jones Fundamentals of Obstetrics and Gynaecology (10th Ed). Jeremy Oats, Suzanne Abraham. Elsevier. 2016. – 384 pp.

6. Kaplan. USMLE Step 2 CK Lecture Notes: Obstetrics and Gynecology. 2019.-pp. 747.

Internet sources:

- https://www.cochrane.org/
- https://www.ebcog.org/
- https://www.acog.org/
- https://www.uptodate.com
- https://online.lexi.com/
- https://www.ncbi.nlm.nih.gov/
- https://pubmed.ncbi.nlm.nih.gov/
- https://www.thelancet.com/
- https://www.rcog.org.uk/
- https://www.npwh.org/