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
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THE METHODICAL RECOMMENDATIONS FOR PRACTICAL CLASS

International Faculty, Course VI

Discipline "Obstetrics and Gynecology"

Practical lesson №35. Topic: Pregnancy and labor in women with extragenital diseases. Immunological incompatibility of maternal and fetal blood. Perinatal infections. Prophylaxis of vertical transmission of HIV.

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 № 35.

PREGNANCY AND LABOR IN WOMEN WITH EXTRAGENITAL DISEASES. IMMUNOLOGICAL INCOMPATIBILITY OF MATERNAL AND FETAL BLOOD. PERINATAL INFECTIONS. PROPHYLAXIS OF VERTICAL TRANSMISSION OF HIV.

LEARNING OBJECTIVE is to 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:

- Clinical manifestations,the characteristics of the course and methods of diagnostics of general diseases of cardiovascular, respiratory, alimentary, urinary, hemopathy and endocrine pathologies in pregnant women.
- Characteristics of the disease course and pregnancy supervision, indications for hospitalization in different extragenital pathology.
- Prenatal and intranatal risk factors, perinatal incidence of disease and morbidity.
- The methodos of delivery in different extragenital pathology.
- Characteristic of course and possible complications in delivery process in obstetric patients with different extragenital pathology.
- Etiopathogenesis of HD of the fetus and infant.
- Classification and clinic of HD.
- Methods of ante- and postnatal diagnosis of HD
- Principles of isoimmunization therapy and HD in the antenatal and early neonatal periods
- Methods of isoimmunization prevention

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.

Pregnancy causes considerable changes in all systems and organs of mother, worsening the course of her present diseases, that leads to apparent risk of the woman's life. Knowledge of the given subject is necessary in order timely to diagnose and treat possible complications of different systems of mother's organism, and for the prevention aiming in optimal strategy of pregnancy and delivery management.

Among the clinical forms of immunopathology of the vaginosity of the most known and lerned a small amount of hemolytic dieses (HD) to the fetus and non-malignancy, which develops in the midst of the insane organisms of the mothers and antibodies of the fetus after The knowledge of the nutrition of the etiopathogenesis of ailments, the peculiarities of obstetric and perinatal tactics, allows in the significant world to change the number of unwelcoming inheritances for the fetus, because of the relevance of the inception of this pathology.

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.

– Pelvic floor.

– 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:

Prenatal and intranatal risk factors, perinatal incidence of disease and morbidity.

The methodos of delivery in different extragenital pathology.

Characteristic of course and possible complications in delivery process in obstetric patients with different extragenital pathology.

Etiopathogenesis of HD of the fetus and infant.

Classification and clinic of HD.

Methods of ante- and postnatal diagnosis of HD

Principles of isoimmunization therapy and HD in the antenatal and early neonatal periods

Methods of isoimmunization prevention

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

26. The pelvic peritoneum covers all of the following pelvic structures EXCEPT the

(A) fimbria of the fallopian tube

(B) uterine fundus

(C) round ligament

(D) uterorectal pouch of Douglas

(E) uterosacral ligament

27. Which of the following statements regarding the female urethra is FALSE?

(A) The urethra is a hollow, multi-layered tube 2.5 to 5 cm long, connecting the bladder with the outside world

(B) The urethral-vesical junction is located at the level of the mid-trigone

(C) There is no true anatomic sphincter within the urethra

(D) The lower two-thirds of the urethra is contiguous with the anterior vaginal wall

(E) The intrinsic “increased” resting tone of the urethra provides part of the continence mechanism for urinary control

28. The nerve supply to the vulva may be characterized as being

(A) mediated via the pudendal nerve

(B) a complex arrangement of Meissner’s corpuscles

(C) most dense of the prepuce of the clitoris

(D) derived mainly from the nerves of spinal cord segments S-2,3,4

(E) all the above

29. Which of the following statements regarding the innervation of the vagina is true?

(A) The upper two-thirds of the vagina is largely innervated by sympathetic fibers from the presacral nerve

(B) The vagina receives only parasympathetic fibers from the hypogastric plexus and pelvic splanchnic nerves. It is one of the few organs without sympathetic innervation

(C) The upper vagina has more touch and pain fibers than the lower vagina

(D) The vagina has more nerve endings per surface area than the clitoris, and therefore is probably the major organ involved in achievement of female orgasm

30. Branches of the internal iliac artery include all of the following EXCEPT the

(A) pudendal artery

(B) obturator artery

(C) superior gluteal artery

(D) ovarian artery

(E) inferior vesical artery

31. Which of the following statements regarding the vessels of the vagina is FALSE?

(A) The arterial supply of the vagina comes from the cervicovaginal branch of the uterine artery, inferior vesical, middle hemorrhoidal, and internal pudendal arteries

(B) Venous drainage of the vagina is accomplished through an extensive plexus rather than through well-defined channels

(C) The lymphatic drainage is such that the superior portion of the vagina (along with the cervix) drains into the external iliac nodes, the middle portion into the internal iliac nodes, and the lower third mainly into the superficial inguinal nodes and internal iliac nodes

(D) Being a relatively avascular organ, the vagina is predisposed to atrophic changes in older patients

32. Opens the abdomen through the linea alba and can be extended from symphysis pubis to xiphoid without dividing the muscles of the abdomen

(A) midline incision

(B) Pfannenstiel incision

(C) Maylard incision

(D) Cherny incision

(E) paramedian incision

33. A low transverse incision extended downward and through the anterior rectus fascia, with the anterior rectus sheath separated from the underlying muscles, from the pubis to near the level of the umbilicus

(A) midline incision

(B) Pfannenstiel incision

(C) Maylard incision

(D) Cherny incision

(E) paramedian incision

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. Pregnant with blood group B (III) Rh (-) 24 weeks of pregnancy revealed titer Rh antibody 1: 8. The first pregnancy ended antenatal fetal death due to Rh-conflict. The general condition is satisfactory. Tonus of uterus is normal. Position of the fetus is longitudinal, presenting part is head, heart rate - 146 beats / min. No edema. Your tactics?

A. Natural labor, waiting tactics.

B. Repeat analysis for Rh antibodies after 2 weeks

C. Send for consultation to therapist.

D. Send for consultation to immunologist.

E. Dynamic observation in antenatal clinic.

2. A pregnant 22 years old. Pregnancy is first. The examination determined Rh negative blood type A (II) in December. From history was found that as a child she spent hematherapy. A man has Rh-positive blood type 0 (I) gr. How often do research to determine the blood of pregnant rhesus antibodies?

A. Definition of antibodies in the blood of pregnant each month.

B. Determination of antibody 1 per month in the first half of pregnancy and 2 times a month in the second half.

C. Determination of antibodies in the blood of pregnant women during her first visit, at 20 weeks term, then every 4 weeks

D. Determination of antibody every two weeks.

E. Determination of antibodies twice during pregnancy.

3. Second gravida has the blood group 0 (I) Rh (-), at term 35 weeks of pregnancy was diagnosed antenatal fetal death. Three days ago determined titer Rh antibody 1: 128, ultrasound signs of hepatosplenomegaly, ascites of the fetus, placenta edema, non-stress test was abnormal. From the proposed delivery refused pregnant. What is the reason antenatal fetal death?

A. Rh - imunisation

B. Intrauterine infection

C. Congenital defect of the fetus

D. ABO conflict

E. Fetal hypoxia

4. Second gravida, in term 34 weeks of gestation during next visit complained of shortness of breath and a rapid increase in the abdomen. OBJECTIVLY: height of fundus of the uterus is 40 cm, abdominal circumference is 102 cm. Presenting part is head, its movabale above the pelvic inlet, fetal heart 132 bpm. / Min. During ultrasound examination was diagnosed polyhydramnios, ascites and hydrothorax in the fetus, placenta is thick. Choose tactics management of pregnancy.

A. Determine fetal biophysical profile

B. Determine blood flow in the vessels of the umbilical cord with dopplerometry

C. ECG

D. Labor induction

E. amniocentesis is necessary to do

6. Second gravida C., at 28 weeks of pregnancy has the Rh- antibodies titer 1: 8. She gave birth child with symptoms of hemolytic disease. When should you check Rh-antibodies titer?

A. Re-determination of antibodies in 1 week

B. Re-determination of antibodies in 1 month

C. Re-determination of antibodies in 3 weeks

D. Re-determination of antibodies in 1 day

E. Re-determination of antibodies after 2 weeks

7. A. A pregnant, 34 weeks gestation, is at the department of pathology. She has Rh- antibodies titer 1:32. From history, she had ectopic pregnancy with level of Rh-antibodies 1: 2 in 14 weeks. What should you do?

A. Re-determination of antibodies in 1 day

B. Cordocentez

C. Early delivery

D. Blood transfusion

E. ECTG

8. 24 years old pregnant with Rh-negative blood , has been registered in the antenatal clinic at 9 - 10 weeks. Pregnancy is third; first pregnancy finished normaly six years ago, the child is healthy; second - miscarriage at 16 - 17 weeks of pregnancy. After birth detected diabetes class "B". The titer of Rh-antibodies 1: 16-1: 32. Correct tactic is:

A. prolongation of pregnancy, prescribe needed dose of insulin.

B. prolonging pregnancy, dietotherapy

C. prolongation of pregnancy with regular determination of blood glucose.

D. prolongation of pregnancy with the introduction of the suspension lymphocytic blood man.

E Stop pregnancy (abortion).

9. Time to give anti-D-imunohlobulyn in puerperium period is:

A. In the first 24 hours after birth.

B. In the early postnatal period.

C. During the first 72 hours.

D. During the first 96 hours.

E. After 1 month postpartum.

10. Secundipara, 26 y.o. addressed to the department of pathology pregnancy in the term 32-33 weeks. Blood A (II), Rh-negative. From the history she gave bith for two Rh-positive healthy kids. Antibody titers during pregnancy is on the level 1:32, not growing. The patient must be delivery:

A. gestational age 34-35 weeks.

B. At 37-38 weeks.

C. Immediately.

D. At 40 weeks.

E. Since the beginning of the spontaneous labor.

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

Pregnant woman’s cardiovascular system

Pregnancy cause serious changes in mother’s cardiovascular system, burdening course of all existing diseases, what can make a danger for woman’s life.

Presence of cardiovascular pathology reflects at clinical course of the pregnancy, childbirth and puerperal period. Pregnant woman with cardiovascular diseases during pregnancy can have adaptation failure. In this group of women is observed high maternal mortality and high perinatal mortality. In-time diagnostic in the beginning of pregnancy, prevention of complications and supporting therapy are preventive therapy of critical conditions at labours with cardiovascular diseases.

Managing delivery through natural delivery tracts subject to pregnancy term and heart pathology data:

Under absence of cardiac insufficiency or under minimal signs – delivery through natural delivery tracts suing spasmolytics, and analgetics.

Under deterioration hemodynamic indications during childbirth against the background cardiotropic therapy – shutdown second period of pregnancy by application of obstetric forceps.

At patients with cardiac insufficiency IIA, IIB and III stages:

Delivery at 37-38 weeks with preliminary labor induction. This tactics is recommended if in process of antepartum preparation turns on well to increase hemodynamic indications correspondingly 1 stage of cardiac insufficiency and fetal condition is satisfactory;

Premature delivery in terms of 28-36 weeks of pregnancy under absence of positive results of treatment during 12-14 days, if happens increase or presence of persistent pulmonary hypertension; stabilization hemodynamic indications after pulmonary edema or thromboembolism during 2 weeks; active rheumatism;

Delivery leads under presence of therapeutist, anaesthetist and constant monitor's control after mother and fetal conditions, CVP control, ECG data, rheopulmonography, hysterography, fetal cardiotocography.

In postnatal and early postnatal periods – bleeding prevention with oxytocin and methylergometrine.

Delivery by cesarean section

Indications for cesarean section because of heart diseases:

Combined insufficiency of aortic and mitral valves;

Mitral stenosis II-III stages;

Valve prosthesis under effect absence from treating cardial insufficiency;

Arterial thromboembolism, carried during pregnancy;

Bacterial endocarditis;

Paravalvular fistula;

Multivalve heart prosthesis;

Complications or unsatisfactory effects from surgical correction of heart defect;

Restenosis, recanalization, traumatic insufficiency after mitral commissurotomy;

Pulmonary edema, carried during pregnancy;

Aortal coarctation, also after surgical correction;

Contra-indications for cesarean section:

Sever decompensation under megalocardia;

Liever cirrhosis;

Severe damages of heart rhythm;

Complex innate malformations of blue type;

Severe pulmonary hypertension;

Cesarean section must be done with serious preparations.

Diseases of respiratory system

Bronchial asthma – is observed at 1% of pregnant women, almost 1/3 of patients observe improvement of disease, 1/3 – worsening, 1/3 – does not have any changes in disease course. Progress of asthma during pregnancy usually comes after carried respiratory disease, mostly at late terms.

Treating BA in pregnant women

Treatment program consists from next components:

Teaching patients;

Objective mark and monitoring lungs function;

Revealing and elimination factors which cause aggravation of disease;

Basic pharmacotherapy;

Aggravation treatment plan;

Preparation and managing childbirth at pregnant women with BA;

Managing childbirth at pregnant woman with BA

Patients must get basic therapy (intal, corticosteroids, prolonged bronchial spasmolytic), which they were using before childbirth;

Patients, who previously took system steroids, are recommended hydrocortisone introduction each 8 hours and during 24 hours after childbirth;

Under operative delivery is excepted use of thiopentone, morphine, alfa-tubocurarin (these drugs can cause asthmatic fit); peridural anesthesia can be used, as like as general anesthesia;

In postnatal period is excepted using PGE-2 alfa and ergometrine, which can cause asthmatic fit. High caution must be followed under prescription pain-killers and antipyretics at patients with aspirin asthma.

Diseases of digestive apparatus

Managing tactics for pregnancy and delivery under gastric ulcer.

Under uncomplicated ulcerous disease pregnancy is possible and even causes positive influence on disease course. Disease does not cause any negative influence on fetal development and delivery can originate through natural delivery tracts.

In case when pregnancy accompanies with relapse of ulcerous disease in 2 weeks before delivery it is necessary to make a preventive course of treatment.

In cases when conservative therapy appeared to be insufficient is recommended to course delivery through natural delivery tracts with simultaneously introducing thin gastric tube in gastric for control after gastric material searching for possible bleeding.

If gastrorrhagia starts in first delivery period, it is an indication for urgent laparotomy, cesarean section and operative treatment of gastric ulcer with following drainage of abdominal cavity. If ulcer bleeding appears at second pregnancy term this needs an urgent delivery under careful anaesthetization by forceps operation with following operative ulcer treatment.

If gastric bleeding stopped after using conservative methods, it is recommended to make delivery at the background of antiulcer therapy. Relapses of bleeding are indications for urgent operative intervention.

Under origin of ulcer disease complications during pregnancy is possible operative intervention with following saving pregnancy.

Managing tactics for pregnancy and childbirth under biliary dyskinesia

Among diseases of digestion system diseases of biliary system occur one of the main places. Pregnancy can cause negative influence on dyskinesia course. Usually aggravation of condition can be observed during first part of the pregnancy. Mostly suffer women with different neurotic and psychoneurotic reactions, signs of emotional and vegetovascular lability.

Pregnancy also predispose for forming gallstones because of gall stagnation in gall bladder because of uterus pressure and decrease of moving activity of gall bladder, because of hyperestrogenemia.

One of the main tasks for treating pregnant woman with biliary dyskinesia by hypertension type is elimination of neurotic disorders, creation favourable conditions for work, elimination of conflict situations.

For normal functional condition of CNS is set sedative drugs; favourable influence sometimes cause novocaine 1% by tablespoonful 3-4 times a day before 20-30 min before meal or 2% solution intramuscularly by 3-4ml every day.

Hypotonic biliary dyskinesia can show itself under pregnancy, but does not cause any effect on pregnancy course.

In treating such patients is reasonable managing diet #5 with cholecystokinetics and other products, which promote bowel emptying, which reflex gall evacuation from gall bladder.

From medicamental agents are recommended cholagogue preparations from cholecystokinetic group, mineral waters with primary high mineralization, significant content of sulphate or chlorides what mostly stimulates cholepoiesis.

Pregnancy and delivery managing tactics under chronic cholecystitis

Diagnosis of exacerbation during pregnancy estimates on the ground of anamnesis, objective data and results of instrumental examination methods. But estimation of gathered data must be done according to possible changes under normal pregnancy.

Treatment principles during aggraviation:

Diet #5;

M- anticholinergic drugs;

Inotropic spasmolytics (drotoverin, papaverine);

Under presens of accompanying hypotensial, hypokinetic dyskinesia – prokinetics, cholekinetics;

Herbat therapy;

Antibacterial therapy, antiparasitic therapy;

Delivery must be done according to obstetric situation under in-time pregnancy.

Pregnancy tactics managing under cholelithiasis

Target of conservative treatment of pregnant woman under cholelithiasis exacerbation is improvement of gall outflow and motor function of gall bladder and its ducts and also fight with infection. In this case usually treatment does not differ from usual treatment for cholecystitis.

If cholestasis cannot be prevented conservatively, it is an indication for operative treatment independently from pregnancy term. Cholecystectomy should be done in the end of II term because of less possibility of spontaneous abortion. Delivery can be done through natural delivery tracts.

Diseases of urinary system in pregnant woman

Among extragenital diseases of pregnant woman kidney's pathology occurs second place. Their frequency vary from 0,1% till 10%. Kidney's disease render unfavourable influence in pregnancyand childbirth course and postnatal period and fetal condition. Under pyelonephritis in 40% of cases pregnancy complicates with late gestosis.

Pregnancy complicates course of pyelonephritis and glomerulonephritis, what is complicated with hormonal, humoral and anatomic changes in organism:

Because of hormonal influence on special receptor in ureter, during pregnancy are observed disorders of urodynamics in upper urinary tracts;

Because of uterer compression by pregnant uterus appears ectasias of upper urine tracts (most to the right);

During pregnancy can be observed slackening of ligamentous apparatus forming nephroptosis, what promote vesicoureteral reflux and kidney infection.

Medical examination of pregnant women with urine systemdiseases

1 stage – nephrologist consultation, if is needed – ambulatory examination. On this stage is done initial clinical-laboratory estimation of the status for deciding the question about saving pregnancy. If is neededfor more complex examination patients are guided into nephrological department.

2 stage – hospitalization in nephrological department. During first 4-5 days exempt besides common clinical examinations determine daily proteinuria, glomerular filtration rate, clierens and excretion of urine acid, blood ferments, also USD of kidneys and other examinations are done.

On the first stage or after ending examinations on the second stage set indications for preventive treatment. For this is set acetylsalicylic acid in small doses – up to 125mg/day, curantyl – 225mg/day for preventing placental insufficiency and connected with it complications at the second part of pregnancy.

3 stage – ambulatory observation after pregnant women from risk group. Periodicity of observations depends on circumstances, but doctor must examine pregnant woman not less than 1 time per month. If is needed – iteratively hospitalization in nephrological department.

4 stage – examination in postnatal period ambulatory or in nephrological department.

Pregnancy managing tactics

In-time and rightly treated pyelonephritis does not cause any danger for pregnancy and fetal. But patients with pyelonephritis must be refered to high risk of gestation complications group.

Determine III risk stages:

I risk stage – patients with noncomplicated pyelonephritis, appeared during pregnancy;

II risk stage – patients with chronic pyelonephritis, which was before pregnancy;

III risk stage - patients with pyelonephritis and hypertension or azotemia, pyelonephritis of just one kidney.

Patients with I and II risk stages can have pregnancy. They must stay in clinic registration. Under III risk stage pregnancy is contraindicated.

Sick pregnant women with pyelonephritis must be hospitalized under each exacerbation, under gestosis signs or fetal condition deterioration (hypoxia, hypotrophy).

Delivery

Under pyelonephritis is recommended delivery through natural delivery tracks. During pregnancy are prescribed spasmolytics, analgesics, and fetal asphyxia prevention. Delivery be cesarean section must be done only by obstetric indications.

Treatment of the patients with pyelonephritis under pyelonephritis

Restoration of urine passage;

Diet with sour drinks;

Herbal diuretics;

Antibiotic therapy;

In I term penicillin and oxacyiin(3-4g per day) or ampicillin (0,5x4 in a day)during 8-10 days are predicted.

Starting from II pregnancy term cephalosporins can be prescribed, treatment course 4-8 days.

Aminoglycosides can be used only after 20th gestation week, but in 2-5% of patients this drugs cause nephrotoxic or ototoxic action, that’s why they can be prescribed only under saved kidney functional ability and hearing diseases absent.

Chemoprophylaxis – urosulfan, ethazol, nevigramon;

Deintoxication and infusion therapy;

Vitamin therapy;

Sedative therapy;

Pregnancy managing tactics under glomerulonephritis

There are III risk stages:

I (minimal) risk stage – patients with latent form;

II (evident) - nephrotic form;

III (maximal) – pregnant women with hypertension and combined forms of chronic glomerulonephritis, with acute glomerulonephritis, with exacerbation of chronic glomerulonephritis, with all forms of disease with azotemia. Under III risk stage pregnancy is contra-indicated.

Under latent form of chronic glomerulonephritis pregnancy is possible.

Patients with nephritic form of glomerulonephritis impress on badly because of severe edemas and

expressed biochemical shifts. But mostly they can be treated symptomaticly. Pregnancy is not forbidden if are possible conditions for thorough observation and long stationary treatment.

Under hypertension and combined forms because of kidney and cardiovascular system function damages pregnancy is contra-indicated. If acute glomerulonephritis was carried more than 1 year ago before pregnancy and was achieved full restoration, pregnancy can be saved and usually it runs without complications.

Under latent form of glomerulonephritis women can delivery in-time and independently.

Under nephritic, hypertension and combined forms develops fetal hypoxia and also appears threat of antenatal death. That is the reason for early delivery by cesarean section.

Pregnancy tactics for pregnancy complicated with urolithiasis

Pregnant women with urolithiasis must be observed in antenatal clinic by obstetrician-gynecologist and urologist.

Indications for hospitalization:

Often colic attacks;

Pyelonephritis addition;

Late gestosis addition;

Deterioration of fetal condition;

Symptoms of abortion;

Treatment should be done by conservative methods.

Indications for operation:

Anuria, caused by ureter occlusion with stone;

Septic condition, caused by calculous pyelonephritis;

Pyonephrosis;

Blood diseases

Anemia – pathologic condition, which is characterized with decreased number of red blood cells and/or haemoglobin in blood.

Classification

Etiology

Anemia caused by feeding:

asiderotic anemia;

B12 - folic anemia;

Folic deficit anemia;

Hemolytic anemia:

Because fermentative damages;

Talasemia;

Drepancytic anemia;

Other inherited hemolytic anemias;

Acquired hemolytic anemias;

Aplastic anemia:

Erythroblastopenia;

Other aplastic anemias;

Acute posthemorrhagic anemia;

Anemias under chronic diseases:

Under neoformations;

Other chronic diseases;

By degree of severity:

Severity stage	Haemoglobin concentration	Hematocrit
Light	109-90g/l	37-31%
Middle	89-70g/l	30-24%
Severe	69-49g/l	23-13%
Very severe	< 40g/l	< 13%

Frequency of anemia's is 15-20% of all diseases during pregnancy, and last years has tendency for growth.

The most widespread among pregnant women is asiderotic anemia (95%).

Treatment and prevention of asiderotic anemia in pregnant women

Pregnant women are assigned adequate diet with increased content of Fe, proteins, vitamis and microelements, iron-containing meds are assigned only in severe foms. Only intolerance of oral Fe preparations or insufficient absorption in intestine are indications for intramuscular introduction. (250mg on each 1g/l of haemoglobin less than normal).

Red blood cells mass transfusion can be done only by vital indications before pregnancy.

Foli deficit anemia can be observed at multipara women under multiply pregnancy, preeclampsia, long use of antiepileptic or oral contraceptives.

Megaloblastic anemia, caused by cyancobalamin insufficiency (vit B12), in pregnant woman can be observed very rarely (under atrophy of stomach mucus membrane or its resection).

Hemolytic anemia can be observed in 1,5% of all pregnant woman anemia cases. Hypoplastic anemia takes 0,44%. Under sickle-cell anemia is very high frequency of maternal mortality and half of pregnancies ends with abortion, stillbirth or neonatal death.

Leukemia is a contra-indication for pregnancy. In 25% after delivery was observed fatal outcome.

Idiopathic thrombocytopenic purpura (Werlhof's disease)

Is characterized with forming in spleen antibodies against own red blood cells. This pathologic process can be decreased by corticosteroids (prednisolon – 20-60mg/day), which are assigned during all pregnancy. If there is no effect – splenectomy.

Preparing pregnancy for delivery under blood diseases:

Examination of red blood condition;

Examinations of hemostasia system (concentration of fibrinogen; coagulation time; protrombin); under any changes in hemostasia system consultation of haematologist is needed.

Consultations of other specialists under present in pregnant woman extragenital pathology;

In-time treatment of pregnancy complications;

Assignation of complex antianemic therapy, vitamin therapy if is needed – hemotransfusions.

Making plan for managing childbirth according anemia severity stage, obstetric anamnesis, extragenital pathology.

Childbirth management:

Delivery must be managed con conservatively;

Monitore all life indications;

Prevention of fetal asphyxia

Prevention of hypo-, and atonic bleeding;

Prebention of infections in case if inopportune water passages;

Complications during pregnancy under anemia

Premature or late waters passage.

powerless labor from 9,8 till 37% (because of chronic hypoxia);

Slow delivery with infection development;

Premature placental separation;

Atonic an hypertonic bleeding in postnatal period. Introduction of uterotonics. Till third day doctor must be prepared for manual extraction of placenta and examination of the uterus cavity if it is neede.

DIC-syndrome;

Infection during delivery and postnatal period. In 12% of cases postnatal period complicates with septic diseases.

Intrauterin fetal asphyxia, intra- and neonatal death of the fetal, stillbirth.

Managing tactics for postnatal period for women with anemia

Prescription of antianemic therapy immediately after childbirth.

Prevention of hypogalactia, mastitis and other pyoseptic diseases.

For increasing effect from antianemic therapy and hypovitaminosis E and A is recommended use of tocopherols 50mg in a day under anemia of I stage, and under II-III stages – vit E, intramuscularly during 2-4 days.

Enhanced feeding in postnatal period. Breast feeding of child not less 10-11 months.

Endocrine diseases in pregnant woman

By WHO, in pregnant woman differ three main types of pancreatic diabetes: DM I type (insulin depending), II type (insulin independent) and diabetes of pregnant woman.

Clinical signs of DM in pregnant woman

Clinical symptoms of DM are: thirst, polyuria, loss of weight, weakness, skin and vaginal itch, neurodermatitis, furunculosis, carbuncles, cataract, pyorrhea, caries.

Rigors, quickened heart rate, hyperhidrosis, depended on food intake, - appearance of them during starvation and disappearance under intake of carbohydrates are character for hypoglycemia.

Hypertension reactions during pregnancy make preconditions for progressing such complications as diabetic glomerulosclerosis, retinopathy, neuropathy. Decrease of organism resistance in aggregate with changed position of abdominal cavity and small pelvis organs promote ascending urinal tract infection.

In first term of pregnancy DM has no features. In second part of pregnancy in most patients course of DM become worse: increases thirst, polyuria, increases sugar level in blood and urine and increases organism necessity in insulin. Appearance of acidosis is a dangerous complication, which tells us about deep disorders in metabolic processes; acidosis is a precursor of diabetic coma.

Deterioration of DM course in second pregnancy term is because:

Increased kidney capacity for sugar, what leads to significant sugar loss with urine;

Insufficiency of carbohydrates assimilability, what leads to acidosis and coma;

Hyperfunction of front lobe of hypophysis. Increased production of ACTH by hypophysis and placenta leads to stimulation of kidneys cortex activity and increased level of cortisol; cortisol assists changing glycogen into glucose, what increases hyperglycemia and glycosuria.

Increased number of somatotropin leads to stimulation in pancreas development of L-cells, which produce glycogen which an antagonist of insulin.

Dig meaning in DM course during pregnancy has functional condition of liver. In patients with DM liver function is inadequate (liver is poor with glycogen and its cells undergeo fatty degeneration). This explains inclination to acidosis. It is known

that patient condition increases before childbirth – sugar level in blood decreases, then decreases in urine and necessity in insulin decreases.

Complications during pregnancy and delivery in patients with DM.

All observed complications depends from vascular changes in mother and from compensation stage of carbohydrate metabolism. Mostly compications are observed at II and III terms of pregnancy. To this complications are carried gestosis (up to 50%); hydramnion (up to 50-60%); pyelonephritis (30%); antenatal fetal death (50%); premature delivery (31,1%); malformations of development (6-10%) etc.

Managing pregnancy:

Diet;

daily ration calorie content – 30-35 kcal/kg, under obesity – 25 kcal/kg, under body mass deficit – 40 kcal/kg;

carbohydrates must contain 45-50% of day calorage, proteins – 20-30%, fat – 25-30%; fully are excluded easy digestible carbonhydrates, are recommended meals fullli wth cellulose;

feeding regiment

breakfast – 25% of all day calories;

second breakfast – 25% of all day calories;

lunch - 35% of all day calories;

dinner – 15% of all day calories; besides main food intakes are recommended 1-2 additional food intakes;

insulinization (human insuln); measure of efficiency are euglycemia fasting and during the day, absence of ketoacidosis and episodes of hyperglycemia;

if is needed – correction of insulin therapy and absence of obstetric complications – hospitalization in endocrinologic department;

under pregnancy complications present – hospitalization in extragenital pathology department;

Contra-indications for saving pregnancy under DM:

Insulin-dependent DM with presence of fast progressive vascular complications (angiopathy, retinopathy, neuropathy, glomerulosclerosis);

Presence of labile (inclined to ketoacidosis) or insulin-dependent forms of DM, which is noncompensated;

Prior long decompensation with hepatodystrophy, pyoinflammatory processes.

Combination of DM and mother Rh immunization;

Combination of DM and tuberculosis;

Combination of DM with cardiovascular system diseases with blood circulation abnormality and active rheumatism.

Selection of delivery methodic

Delivery at most patients with DM is made through natural maternal passages.

Complications during delivery

Birth activity slackening;

Progressive fetal hypoxia;

Forming of clinically narrow pelvis, laboured excretion of shoulders and head under big fetal;

Postnatal period

At 25% of pregnant woman DM course after delivery did not changed at 25%is observed temporary deterioration of common condition at the expense of subinvolution of uterus, infection processes, diet abnormality or incorrect dose of insulin.

In first 2-3 days after delivery need in insulin decreases to 4-5 units. Starting from 3-4 days after delivery, dose of introducing insulin restores till previous numbers. To the third twenty-four hours after childbirth takes place normalization of

ACTH, cortisol, catecholamine and all this leads to hypoglycemia in 50% of pregnant woman, especially after decreasing level of insulin.

After childbirth is needed prescription of antibiotic with immune correctors, anticoagulants, plasma transfusion, glucose solutions.

Discharge from department is possible after glycemia correction and adjustment of insulin dosage. Usually up to 7-10th day after delivery insulin doses became as like as they were before pregnancy.

Cushing's syndrome

Etiology. Epactal secretion of corticosteroids can be caused by pituitary adenoma, suprarenal gland tumor (adenoma, cancer), and also ectopic ACTH-producing tumor.

Clinical picture. Patients have lipopexia on face (moon face), occiput, in girdle of superior extremity (bulls hump) and stomach. In 30-75% of cases - amenorrhea is observed. Other symptoms include purple stretches on the stomach, hirsutism, arterial hypertension and proximal muscles weakness. In 40% of patients with Cushing’s syndrome psychic disorders can be observed.

Prognosis for pregnant woman is unfavourable – in 50-60% cases pregnancy ends with artificial abortion, premature delivery or fetal death.

Treatment: depends on disease reason and pregnancy term. If Cushing’s syndrome was diagnosed in I pregnancy term, it is an indication for abortion and suprarenal gland and hypophysis tumor resection. In II pregnancy term - spontaneous abortions. If pregnancy can be saved question about treatment is decided individually. If disease is diagnosed in III pregnancy term than before delivery is assigned metirapon and after – radical treatment.

Adrenocortical insufficiency (Addison's disease)

Etiology:

Autoimmune affection of adrenal glands;

Tuberculosis of adrenal glands;

Necrosis of adrenal glands tissue (haemorrhage, mycotic lesion);

Metastasis in adrenal glands;

Hypoadrenal crisis – raucous fall of corticosteroids level.

Clinical signs: appetite loss, nausea, vomiting, stomach ache, hypovolemia, arterial hypotension, shock.

Treatment: emergency – fast blood volume restoration+hydrocortisone each 6 hours by 100mg intravenously during 24 hours! After condition improvement and stabilization high dose of hydrocortisone gradually decrease.

Managing childbirth and postnatal period.

High risk of fetal death under treatment absence (40-50%);

High risk of hypoadrenal crisis;

In early terms of pregnancy is needed to differentiate nonspecific symptoms (nausea, vomiting) with vomiting of pregnant;

During delivery introduce increased dose of hydrocortisone (100mg each 6 hours during delivery);

After childbirth dose gradually decrease till supporting level;

Breast feeding is not forbidden;

Under in-time started suprarenal insufficiency treatment non complications are observed, because suprarenal glands start to produce hormones since III pregnancy term;

True hypertaldosteronism

(Conn's syndrome).

Is characterized with arterial hypertension, hypokaliemia, increased secretion of aldosterone and significant decrease of rennin activity in plasma combination.

Causes:

Adenoma of adrenal gland (60%);

Hyperplasia of adrenal gland cortex;

Cancer of adrenal glands;

In pregnant woman observes very rarely. Because o this influence on pregnancy is studied not enough. It is known that aldosteron penetrate placenta. In normal pregnancy course level of aldosteron and deoxycorticosterone increases, but regulation of hormone secretion stays at the former level.

Treatment: under adrenal gland cortex hyperplasia – hypotension preparations with potassium diuretics.

Pheochromocytoma.

is a tumor from chromaphine tissue, which produce a lot of adrenalin and noradrenaline.

Clinical picture:

head ache, hyperhidrosis, tachycardia, uneasiness, stenocardia;

paroxysmal character of manifestation;

complains on weakness between attacs;

presence of hypertension crisis's (50%) – from few times per month up to few times per day, duration from one minute to few hours;

body mass loss (increased basal metabolism);

Treatment: during pregnancy patient take therapy of alfa- adrenoreceptor blocking agent (under treatment absence is high level of mother and fetal mortality).

Isoantigenic incompatibility of maternal and fetal blood

Isoimmunization – one of the clinical forms of immune pregnancy failure that arises conditional upon incompatibility of maternal and fetal organisms for different antigens and leads to severe disorders in the state of fetus and baby.

The main forms are:

Rh- isoimmunization;

AB0- isoimmunization.

Rh isoimmunization – humoral immune answer to fetus erythrocytal antigenes of Rh group. Antibodies (Ab) get through placenta and cause extravascular hemolysis and anemia conditioning erythroblastosis of fetus.

Risk factors:

Artificial abortion in anamnesis;

Spontaneous abortion in anamnesis;

Rh-positive blood type transfusion in anamnesis;

Ectopic pregnancy;

Absence of specific prophylactics of Rh incompatibility after the end of previous pregnancy;

Rh incompatibility during previous pregnancies.

Risk of isoimmunization is heightened by:

Placental abruption;

Surgery (manual removal of placenta, caesarean section, amniocentesis) in anamnesis or during existent pregnancy;

Virus infection (herpes, cytomegalovirus).

AB0 incompatibility develops in conditions of incompatibility of maternal and fetal blood groups and presence of Ab to erythrocytes of fetal blood group. Group-specific Ab may be produced in maternal organism as an answer to hemotherapy, vaccines and therapeutic serums, contact with bacteria that contain A and B antigenic factors.

In most cases immune incompatibility happens when maternal blood type is 0(I) and fetal blood type is A(II), seldom B(III) or AB(IV). AB0 isoimmunization can be the cause of different forms of hemolytic disease (HD) of newborn from subclinical form to severe erythroblastosis and antenatal fetal death. Although whilst in AB0 incompatibility fetal erythrocytes are quickly destroyed in maternal organism and Ab synthesis doesn’t catch so as a rule the form of the disease is mild.

It is wise to make AB0-specified Ab test in women with recurrent miscarriage or antenatal fetal death in anamnesis.

Ab0 incompatibility smoothes pregnancy course whilst in Rh incompatibility. Rh incompatibility arises more often if mother and fetus have the same or common blood types of AB0 system.

Diagnostics of immune conflict

Anamnesis: blood transfusion without regard to Rh group, abortions, stillbirth or babies with HD, data of specific prophylactics of isoimmunization during previous pregnancies.

Rh-Ab titre test: rise and instability of Rh-Ab titre indicates on Rh incompatibility. In titre 1:32 and higher HD arises more often, the risk of antenatal fetal death is high.

AB0-specific Ab test is performed in pregnant women with O(I) blood type that have spontaneous abortions, stillbirth, child death from HD in anamnesis.

Diagnostics of HD of fetus

Ultrasound examination allows to visualize symptoms of an early and fully developed hydrops fetalis.

Symptoms of an early stage of hydrops fetalis:

polyhydramnion;

hepatosplenomegaly.

Symptoms of a fully developed hydrops fetalis:

growth of echogenicity of fetal intestines;

cardiomegaly and pericardial effusion;

ascites and hydrothorax;

“Buddha” posture;

motion activity deminussion;

placenta thickening.

Ultrasonic scanning is carried out in pregnant women from the risk group for Rh incompatibility:

before 30 weeks of pregnancy once a month;

after 30 weeks of pregnancy twice a month;

on appearance of fetal damage symptoms every day up to delivery.

Cardiotocography – symptoms of chronic hypoxia of fetus and decrease of compensatory ability of fetoplacental complex.

Transabdominal amniocentesis is carried out after 26 weeks of pregnancy.

A question of necessarity of amniocentesis is solved depending upon Ab titre and anamnesis data. If there are indications to amniocentesis a woman must be treated in the health care institution of the 3rd level.

Indications to amniocentesis:

Ab titre 1:64 and higher;

4-fold titre growth in repeated test in 2 weeks;

Ab titre growth and ultrasonic symptoms of HD of fetus;

stillbirth, children with HD in anamnesis.

Contraindications:

threatening premature birth;

fever.

Amniotic fluid test allows to estimate fetal anemia severity.

In the case of development of fetal HD, rise of the concentration of bilirubin in amniotic fluid and growth of amniotic fluid optical density (AFOD) indicates severity level of the HD.

If AFOD is 0,1 or lower then pregnancy can be prolonged, if AFOD is 0,15 or over then delivery preparation should be started.

Amniotic Fluid Optic Density	Bilirubin concentration in amniotic fluid, mg/l	Fetus state
0,15 – 0,20	0 – 2,8	Risk of fetal HD development is low
0,21 – 0,34	2,9 – 4,6	Risk of fetal HD development is mild
0,35 – 0,70	4,7 – 9,5	Risk of fetal HD development is high
Over 0,70	Over 9,5	Risk of fetal HD development is extremely high

Cordocentesis – umbilical cord blood taking through anterior abdominal wall of a woman (is carried out at the health care institution of the 3rd level if there are trained specialists). In fetal blood we measure:

hemoglobin and hematocrit;

blood group and Rh-factor;

bilirubin level;

reticulocytes amount;

serum protein;

fetal erythrocytes-fixed Ab.

If fetal blood is Rh-negative further analysis are not necessary.

Postnatal diagnostics of hemolytic disease of newborn (HDN) – blood group, Rh-factor and bilirubin level, speed of hourly bilirubin level rise, Hb and Ht levels are measured in blood of umbilical cord vessels. Coombs direct test is carried out on peripheral blood of fetus.

Tactics of pregnancy care and delivery management

On the stage of antenatal clinic:

Rh-Ab titre is measured in blood on the first visit, in 20 weeks and later every 4 weeks.

If pregnant woman has 0(I) blood type we measure her husband’s blood type and identify the risk group for newborn for AB0 incompatibility.

On the stage of maternity obstetric service:

Delivery in women with Rh-negative blood type with isoimmunization is carried out prematurely depending on blood Ab titre.

Indications to premature delivery in Rh-incompatibility:

Ab titre 1:64 (critical level);

4-fold titre rise in repeated test;

AFOD 0,35-0,70 and over, bilirubin level in amniotic fluid is 4,7-9,5 mg/l;

ultrasonic symptoms of HD of fetus;

stillbirth or babies with HD in anamnesis.

Straight after baby's birth umbilical cord is clamped to prevent of anti-Rh Ab getting into baby's bloodstream, placental end of umbilical cord is not clamped (to decrease the risk and volume of fetomaternal transfusion). In the case of caesarean section manual removal of placenta is not performed.

Prophylactics of Rh-immunization

Prophylactics during pregnancy without previous immunization of pregnant woman is carried out by intramuscular injection of 1 dose (300 mcg) of anti-Rh (D) immunoglobulin:

at the term of pregnancy of 28-32 weeks;

in case of symptoms of threatened spontaneous abortion before 28 weeks of pregnancy;

after amniocentesis or chorion biopsy;

after molar pregnancy removal;

after ectopic pregnancy;

after abortion (not later than in 48 hours);

after mistaken transfusion of Rh-positive blood to Rh-negative woman;

after platelet concentrate transfusion;

in clinical situations that are accompanied by fetus cells arriving in maternal bloodstream;

placenta abruption, uterine bleeding (of an unknown etiology);

trauma of pregnant woman (e.g. car crash).

In pregnancy term less then 13 weeks dose of anti-Rh (D) immunoglobulin is 75 mcg, in pregnancy term over 13 weeks – 300 mcg.

Prophylactics after birth of Rh-positive baby: intramuscularly 1 dose (300 mcg) of anti-Rh (D) immunoglobulin during first 72 hours.

Contraindications to injection of anti-Rh (D) immunoglobulin – anamnesis data of anaphylactic or severe system reactions to human immunoglobulin.

Prophylactics of HD caused by AB0 incompatibility is not performed during pregnancy.

Unspecific drug prophylactics and treatment of Rh incompatibility is not performed in pregnant women.

Jaundice of the newborn – appearing of visible yellow tinction of skin, sclerae and/or mucosae as a result of bilirubin blood level rise in newborn.

Early jaundice – appears during the first 36 hours after birth. Jaundice that appeared during the first 24 hours after birth is always a symptom of pathology.

“Physiological” jaundice – appears after the first 36 hours after birth and is characterized by total bilirubin level rise in blood serum not more then up to 205 mmol/l.

Complicated “physiological” jaundice– physiological jaundice that is accompanied by changes in a state of newborn.

Prolonged (protracted) jaundice – is diagnosed after the 14th day in mature newborns and after the 21th day in premature newborns.

Late jaundice – appears after the 7th day of newborn’s life.

Methodics of clinical examination and staging of jaundice

Skin colour: check for yellow discoloration of skin should be held on a fully naked baby in condition of sufficient (optionally daylight) illumination.

Yellow skin tinction spread: It is wise to use modified Kramer's scale for estimation of jaundice appear stages and correlation with bilirubin blood level. An alternative to the visual estimation with Kramer's scale can be bilirubin skin level analysis with percutaneous bilirubinometry.

Time of jaundice appear:

Child age (hours)	Jaundice localization	Conclusion
24	Any	
24-48	Extremities	"dangerous jaundice"
>48	Foots, arms	

Immediate phototherapy should be started after symptoms appearing of a "dangerous jaundice".

Clinical state of a newborn

Clinical state of newborn should be estimated on appearance of jaundice:

Grade of child adequacy, reflex activity.

Adequacy of breast feeding that should take place not less than 8 times a day.

Skin turgor state and mucosae wetness

Liver and spleen sizes.

Diction rate and urine character.

It is extremely important to check newborns with jaundice for symptoms of central neural system disorders (kernicterus):

Early symptoms – appearance of lethargy, drowsiness, torpidity and sucking reflex repression.

Acrimony, muscular hypertonia, high sound scream, possible temperature rise at a later period.

At terminal stage child develops opisthotonus, convultions, apnea, monotonous high-pitch cry, deep stupor or coma.

3.3. Requirements for the results of work.

Which are clinical signs, course features and diagnostic methods of cardiovascular diseases at pregnant woman?

What are the methods for delivery under cardiovascular pathology at pregnant woman?

Which are clinical signs, course features and diagnostic methods of respiratory diseases at pregnant woman?

What are the methods for delivery under respiratory diseases at pregnant woman?

Which are clinical signs, course features and diagnostic methods of diseases of digestion system at pregnant woman?

Which are clinical signs, course features and diagnostic methods of kidney diseases at pregnant woman?

Indications for hospitalization under kidney diseases?

Which are clinical signs, course features and diagnostic methods of blood diseases at pregnant woman?

What are the possible complications during pregnancy at labour with blood disease?

Which are clinical signs, course features and diagnostic methods of endocrine system diseases at pregnant woman?

What are the possible complications during childbirth at labors with endocrine diseases?

Describe the AB0 and Rh systems.

Explain the pathogenesis of essential hypertension fetus and infant.

Bring GC classification of the fetus and infant.

Describe the clinical characteristics of different forms of GC.

List the diagnostic methods GC fetus and infant.

Describe the main treatment of hemolytic disease in the antenatal period.

State the principles of treatment of hemolytic disease in the early neonatal period.

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

Tests

1. Pregnant with blood group B (III) Rh (-) 24 weeks of pregnancy revealed titer Rh antibody 1: 8. The first pregnancy ended antenatal fetal death due to Rh-conflict. The general condition is satisfactory. Tonus of uterus is normal. Position of the fetus is longitudinal, presenting part is head, heart rate - 146 beats / min. No edema. Your tactics?

A. Natural labor, waiting tactics.

B. Repeat analysis for Rh antibodies after 2 weeks

C. Send for consultation to therapist.

D. Send for consultation to immunologist.

E. Dynamic observation in antenatal clinic.

2. A pregnant 22 years old. Pregnancy is first. The examination determined Rh negative blood type A (II) in December. From history was found that as a child she spent hematherapy. A man has Rh-positive blood type 0 (I) gr. How often do research to determine the blood of pregnant rhesus antibodies?

A. Definition of antibodies in the blood of pregnant each month.

B. Determination of antibody 1 per month in the first half of pregnancy and 2 times a month in the second half.

C. Determination of antibodies in the blood of pregnant women during her first visit, at 20 weeks term, then every 4 weeks

D. Determination of antibody every two weeks.

E. Determination of antibodies twice during pregnancy.

3. Second gravida has the blood group 0 (I) Rh (-), at term 35 weeks of pregnancy was diagnosed antenatal fetal death. Three days ago determined titer Rh antibody 1:

128, ultrasound signs of hepatosplenomegaly, ascites of the fetus, placenta edema, non-stress test was abnormal. From the proposed delivery refused pregnant. What is the reason antenatal fetal death?

A. Rh - imunisation

B. Intrauterine infection

C. Congenital defect of the fetus

D. ABO conflict

E. Fetal hypoxia

4. Second gravida, in term 34 weeks of gestation during next visit complained of shortness of breath and a rapid increase in the abdomen. OBJECTIVLY: height of fundus of the uterus is 40 cm, abdominal circumference is 102 cm. Presenting part is head, its movabale above the pelvic inlet, fetal heart 132 bpm. / Min. During ultrasound examination was diagnosed polyhydramnios, ascites and hydrothorax in the fetus, placenta is thick. Choose tactics management of pregnancy.

A. Determine fetal biophysical profile

B. Determine blood flow in the vessels of the umbilical cord with dopplerometry

C. ECG

D. Labor induction

E. amniocentesis is necessary to do

6. Second gravida C., at 28 weeks of pregnancy has the Rh- antibodies titer 1: 8. She gave birth child with symptoms of hemolytic disease. When should you check Rh-antibodies titer?

A. Re-determination of antibodies in 1 week

B. Re-determination of antibodies in 1 month

C. Re-determination of antibodies in 3 weeks

D. Re-determination of antibodies in 1 day

E. Re-determination of antibodies after 2 weeks

7. A. A pregnant, 34 weeks gestation, is at the department of pathology. She has Rh- antibodies titer 1:32. From history, she had ectopic pregnancy with level of Rh-antibodies 1: 2 in 14 weeks. What should you do?

A. Re-determination of antibodies in 1 day

B. Cordocentez

C. Early delivery

D. Blood transfusion

E. ECTG

8. 24 years old pregnant with Rh-negative blood , has been registered in the antenatal clinic at 9 - 10 weeks. Pregnancy is third; first pregnancy finished normaly six years ago, the child is healthy; second - miscarriage at 16 - 17 weeks of pregnancy. After birth detected diabetes class "B". The titer of Rh-antibodies 1: 16-1: 32. Correct tactic is:

A. prolongation of pregnancy, prescribe needed dose of insulin.

B. prolonging pregnancy, dietotherapy

C. prolongation of pregnancy with regular determination of blood glucose.

D. prolongation of pregnancy with the introduction of the suspension lymphocytic blood man.

E Stop pregnancy (abortion).

9. Time to give anti-D-imunohlobulyn in puerperium period is:

A. In the first 24 hours after birth.

B. In the early postnatal period.

C. During the first 72 hours.

D. During the first 96 hours.

E. After 1 month postpartum.

10. Secundipara, 26 y.o. addressed to the department of pathology pregnancy in the term 32-33 weeks. Blood A (II), Rh-negative. From the history she gave bith for two Rh-positive healthy kids. Antibody titers during pregnancy is on the level 1:32, not growing. The patient must be delivery:

A. gestational age 34-35 weeks.

B. At 37-38 weeks.

C. Immediately.

D. At 40 weeks.

E. Since the beginning of the spontaneous labor.

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. Collins S, Arulkumaran S, Hayes K. Oxford Handbook of Obstetrics and Gynaecology, 2013.-p. 22-48, 263-326.

3. 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.

4. Obstetrics by Ten Teachers (20th ed) Louise C. Kenny, Jenny E. Myers. – CRC Press. – 2017. – 342 pp.

5. Current Progress in Obstetrics and Gynaecology. Vol 4. Eds. J. Studd, Seang Lin Tan, F. Chervenak. – 2017. – 419 pp.

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/