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**PREGNANCY AND LABOR IN CASE OF EXTRAGENITAL DISEASES**

***Tutorial for practical lessons of***

***gynecology for students of the 5th course of medical***

***faculty***

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**Abbreviations**

**HF** - heart failure

**MAP** - mean arterial blood

**CHF** - Chronic Heart Failure

**CS** - caesarean section

**ICU**- intencive care unit

**ECG** electrocardiogram

**AH**- artetial hypertension

**IUGR** - Intrauterine growth restriction

**Hb** - hemoglobin

**IDA** - iron-deficient to anaemia

 **FPI** - fetal placental insufficiency

**TTG** - thyroid-tropic hormone

1. **Actuality of theme**

Pregnancy is often complicated by extragenital pathology. Some of extragenital diseases are less clinically relevant but often they can be dangerous both for mother and fetus. Approximately 60% of pregnant women have different types of extragenital pathology. Student needs to be familiar with the most frequent types of extragenital diseases in pregnant wome, approaches to treatment and obstetrical tactics.

 For the last decades intensity of researches of features of extragenital diseases increases for pregnant. Considerable successes are now attained in development of obstetric cardiology, nephrology, endocrinology. The tactic/pl of conduct of pregnancy and labor changed. More frequent began to allow pregnancy at many forms and variants of diseases, which were before considered contra-indicated for a genesial function.

Pathology of the cardiovascular system occupies 1st place among reasons of maternal death rate from extragenital pathology. Very high percent of complications during pregnancy, in labor and in a puerperium, the disease of kidneys, endocrine pathology (10 - 26% abortion, 14-35% oligotrophy of fetus, removing layer by layer of placenta), give. At the same time experience testifies that timely exposure these вадів pathologies for pregnant, assiduous treatment with the repeated hospitalization during pregnancy, correct conduct of labor and puerperium enable acutely to reduce lethality and amount of complications at pregnancy, encumbered with cardiovascular diseases and diseases of kidneys.

1. **Purpose of studying :**
	1. **A student must know**
2. Course and management of pregnancy in women with diseases of the cardiovascular system
3. Course and management of pregnancy in women with diseases of the blood-forming organs, including anemia
4. Course and the pregnancy in women with respiratory diseases
5. Course and management of pregnancy in women with kidney disease and urinary tract
6. Course and management of pregnancy in women with diseases of the endocrine system (diabetes mellitus, diffuse toxic goiter, hypothyroidism)
7. Course and management of pregnancy in women with diseases of the gastrointestinal tract
8. Driving postpartum period in women with relevant pathology.
	1. **The student must be able to:**
9. To diagnose diseases of the organs of the cardiovascular system
10. Diagnose diseases of the respiratory system during pregnancy
11. Diagnose diseases of the endocrine system during pregnancy
12. Diagnose diseases of the digestive system during pregnancy
13. Diagnose kidney and urinary tract diseases during pregnancy
14. Promptly detect contraindications to pregnancy in women with extragenital pathology
	1. **Practical skills:**
15. To conduct a special obstetrical examination of pregnant women with extragenital pathology
16. Provision of specialized care for pregnant women with extragenital pathology
17. Prescribe treatment depending on the type and severity of the extragenital pathology
18. A plan of pregnancy with some kind of physical illness
19. To draw up a plan for conducting childbirth, taking into account the type of extragenital pathology and the severity of its course
20. Make a plan for postpartum period
21. Prognostication deviation of the course of pregnancy and childbirth in women with extragenital pathology

**3. Basic part**

**3.1. Pregnancy with diseases of the cardiovascular system (acquired and congenital heart disease, operated heart, heart rhythm disturbances**

In pregnant women, heart disease occurs in 2-5%. Acquired heart disease is more often a consequence of rheumatic disease. Diagnosis of the activity of the rheumatic process in pregnant women is complicated due to the fact that pregnancy contributes to the emergence of positive tests for the inflammatory process (leukocytosis, shift of the leukocyte formula to the left, positive reaction of anti streptococcal antibodies and C-reactive protein, increase of the amount of fibrinogen, etc.).

The disadvantages of maternal and fetal pregnancy are:

- activity of the rheumatic process;

- a combination of heart disease and age of a pregnant woman over 35 years old;

- significant hypertrophy of the left, right ventricles and left atrium;

- the emergence of extrasystoles III-V gradations;

- occurrence of signs of HF (heart failure)

With implanted artificial heart valves there is a risk of thromboembolism.

Aggravation of the rheumatoid process in pregnant women occurs more often in the first trimester and in the postpartum period.

Violation of hemodynamics is observed in 24-32 weeks in connection with a significant increase in BCC.

Terms of hospitalization of pregnant women with heart disease.

And hospitalization - up to 12 weeks to clarify the diagnosis and address the question of the possibility of prolonging the pregnancy. Second hospitalization - in the period of 24-30 weeks to support and determine the pumping function of the heart. III hospitalization - in the period of 37-38 weeks for preparation for childbirth and development of tactics for their management.

Contraindications to pregnancy.

1. Active stage of the rheumatic process or if from the moment of the last exacerbation passed no more than 1 year.

2. Any flaw in the heart with signs of decompensation.

3. Mitral valve stenosis or combined defect with a predominance of stenosis (III, IV, V degrees by Bakulev)

4. Significant coarctation of the aorta.

5. Condition after mitral commissurotomy more than 5 years or in case of restenosis.

6. Flushing arrhythmia in conjunction with mitral stenosis.

7. Significant pulmonary hypertension with any defect of the heart.

8. Combination of cardiac pathology with other extragenital pathologies.

9. Congenital heart defects (blue heart defects - triad, tetrad Fallot, Eisenmeiger syndrome).

Indications for the exclusion of the second period of childbirth with obstetric forceps:

- septic endocarditis;

- endocarditis;

- circulatory failure IIA (class II)

- arrhythmias.

Impressions to CS (caesarean section).

As a rule, a cesarean section is conducted for obstetric displays, as well as for

- CHF of the ІІB-ІІІ stage;

- rheumocarditis of the II-III degree of activity;

- coarctation of the aorta in the presence of hypertension or signs of the onset of aortic dissection;

- tachyarrhythmic form of atrial fibrillation with high pulse deficit.

Contraindications to Caesarean section:

- severe decompensation;

- cardiomegaly

- cirrhosis;

- severe heart rhythm disorders;

- complex congenital malformations of the heart of the blue type.

Such patients are contraindicated in pregnancy.

Discontinuation is carried out in conditions of hyperbaric oxygenation. The forecast is usually unfavorable.

Pregnant women receiving glucocorticoid therapy continue to take ies during delivery and in the postnatal period.

Classification of HF Strazhesko and Vasilenko.

And the stage: the lonely, palpitations, fatigue only when physical activity.

II stage A: stagnation in a small circle of blood circulation, cyanosis, lonely at rest, wheezing in the lungs.

ІІ stage B: stagnation in a large circle of blood circulation, liver enlargement, edema, ascites, hydrothorax, decrease in blood circulation velocity.

Stage III: Irreversible changes in the internal organs.

Classification of blood circulation insufficiency (international).

And the class: asymptomatic course, without limitation of physical activity.

II class: the symptoms of the disease are poorly expressed, insignificant limitation of physical activity.

Class III: symptoms of the disease are expressed, significant limitation of physical activity.

ІV class: discomfort for any physical activity.

Symptoms that can occur in pregnant women without heart disease:

- systolic functional noise;

- increased respiratory activity, sometimes shortness of breath;

- Edema of the lower extremities in the second half of pregnancy.

Criteria for diagnosing heart disease during pregnancy:

- diastolic, presistolic or constant noises in the heart;

- a clear increase in the size of the heart;

- gross systolic noise, especially in combination with trembling;

- significant arrhythmia.

Conducting pregnant women with heart disease.

Pregnant women with HF I-II classes or I-ІІА stages Strazhesko are allowed to take pregnancy, but to monitor possible signs of development of heart failure.

Symptoms of heart failure:

- the beginning can be erased;

- cough, wheezing during physical examination;

- the inability to perform daily homework;

- Increasing shortness of breath when loaded.

Hospitalization is shown. Constant monitoring of pulse and respiration of the pregnant woman.

Diseases of the heart of class III.

In one trinity of women during pregnancy occurs decompensation. A well-balanced method may end with a lethal method, so it is recommended that the abortion be interrupted for up to 12 weeks.

Rheumatic heart defects.

Exacerbation of the rheumatoid process occurs more often in the first trimester and after delivery.

Some authors point to exacerbations in the last 2 months of pregnancy.

Features of rheumocarditis in pregnant women - latent period. Pregnant examination is carried out, as in rheumprocesses.

Critical periods:

- 14 weeks;

- 20-32 weeks;

- Postpartum.

If the pregnancy comes on the background of an active rheumatoid process, then the approach is individual, more often, after the treatment is performed artificial abortion.

Combined heart defect with stenosis advantage.

During pregnancy and in childbirth, swelling of the lungs is possible, with no method of degeneration helping to eliminate pulmonary edema. The optimal method is a commissurotomy (in any term), preferably in 24-32 weeks, or during labor, a caesarean section with subsequent commissurotomy.

The pulse rate is greater than 100 / min or the respiration rate greater than 24 per minute is a sign of cardiac disturbance.

In childbirth - half-position. To remove pain and feelings of fear, use is an epidural anesthetic. Prevent hypotension.

Resolving is carried out through physiological paths, Caesarean section - by obstetric indication.

If there was a heart failure until the full disclosure of the cervix, the correction of cardiac activity is performed:

- oxygen therapy (omission of oxygen through 70-90 ° alcohol;

- rapid degradation;

- strong diuretics;

- Fowler's position.

The second period of labor is excluded by obstetric forceps.

Postpartum period.

After the birth of the baby and the placenta, heart failure may develop. Some authors recommend the use of a burden on the mother's abdomen (800-900 gr.), Especially in the phenomena of stagnation in the large circle of blood circulation. In the postpartum period it is possible to exacerbate the rheumatic process and the emergence of other infectious diseases.

Insufficiency of the mitral valve (6-7%).

In the absence of significant regurgitation of blood, arrhythmias and HF pregnancy is tolerated. With significant enlargement of the left atrium, flashing, atrial fibrillation develops. Possible occurrence of acute mitral valve failure as a result of spontaneous rupture of dry chords. Combination of mitral valve failure with signs of mitral stenosis or impression of other valves the heart testifies to the rheumatic nature of the disease.

Aortic insufficiency (0.5-0.8%).

Pregnancy is contraindicated in severe defects. Symptoms of HF appear rarely, since the left ventricle cope with its function.

Mitral valve prolapse.

Can be congenital and acquired as a result of rheumatic process, or myocarditis, which develops as a result of another microbial pathogen. This heart defect can lead to arrhythmias, ventricular fibrillation and sudden asystole.

**3.2. Hypertonic disease and pregnancy**

**Arterial hypertension - increased systolic blood pressure to 140 mmHg. or higher and / or diastolic blood pressure up to 90 mmHg. or higher at two measurements at rest with an interval of at least 4 hours or an increase in blood pressure of 160/110 mm Hg. one time.**

**Chronic hypertension - hypertension that was observed before pregnancy or originated (first detected) to 20 weeks of gestation.**

**Hypertension is unspecified - hypertension detected after 20 weeks of gestation, in the absence of information on blood pressure (AT) up to 20 weeks of gestation.**

Pregnancy-related hypertension is diagnosed and evaluated for severity based on diastolic pressure, which more describes peripheral vascular resistance and, depending on the emotional state of the woman, changes less than systolic. Diastolic pressure is also used to determine the volume of treatment and as a target for antihypertensive therapy (target blood pressure).

CHRONIC HYPERTENSION

1. Classification

**1.1. By the level of arterial pressure**

|  |  |  |
| --- | --- | --- |
| Arterial hypertension | Systolic blood pressure, mm of pm | Diastolic blood pressure, mm of pm |
| 1 degree (soft) | 140–159 | 90–99 |
| 2 degree (moderate) | 160–179 | 100–109 |
| 3 degrees (hard) | >180 | >110 |
| Isolated systolic | >140 | >90 |

* 1. **For lesions of target organs**

|  |  |
| --- | --- |
| І stage | Objective signs of organic damage to target organs are absent |
| II stage | There are objective signs of organic lesions of the target organs without clinical symptoms on their part or disruption of the function: - hypertrophy of the left ventricle (according to ECG, echocardiography, radiography); - generalized or focal narrowing of the arteries of the retina; - microalbuminuria, or proteinuria, or a slight increase the concentration of creatinine in plasma (up to 177 μmol / L). |
| III stage | There are objective signs of organic damage to target organs, provided there are clinical symptoms on their part or a violation of the function: - heart - myocardial infarction, cardiac insufficiency of the ІІА stage or above; - brain - cerebral stroke, transient ischemic attacks, hypertensive encephalopathy, vascular dementia; - Retins - hemorrhages and exudates in the retina with or without edema of the optic nerve; - kidney - concentration of creatinine in blood plasma> 177 μmol / l; - vessels - stratifying aneurysm of the aorta |

2. Diagnosis of chronic hypertension during pregnancy is carried out on the basis of:

- anamnestic data on the increase of AT≥140 / 90 mm Hg before pregnancy and / or determination of AT≥140 / 90 mm Hg resting twice at intervals of at least 4 hours or ≥160 by 110 mm Hg once in the term up to 20 weeks of pregnancy.

3. Pregnant women with chronic hypertension constitute a risk group for the development of preeclampsia, premature placental abnormalities, fetal growth retardation, and other maternal and perinatal complications.

4. The issue of the possibility of pregnancy is decided jointly by the obstetrician-gynecologist and the therapist (cardiologist), taking into account the survey data and information on the previous course of the underlying disease.

4.3. Contraindications to pregnancy (up to 12 weeks):

 - Severe arterial hypertension (3 levels of hypertension for the WHO) - AT≥180 / 110 mm Hg;

 - Severe damage to target organs caused by arterial hypertension:

- heart (transfusion of myocardial infarction, heart failure),

- brain (transfused stroke, transient ischemic attacks, hypertensive encephalopathy);

- eye retina (hemorrhages and exudates, swelling of the optic disc);

- kidney (kidney failure);

- vessels (straining aortic aneurysm);

- malignant course of hypertension (diastolic blood pressure> 130 mmHg, changes in the fundus according to the type of neuro-retinopathy).

5. The main objective of medical care for pregnant women with chronic hyperesthesia is to prevent the occurrence of combined preeclampsia or as early as possible to establish this diagnosis.

Joining preeclampsia to chronic hypertension in pregnant women significantly impairs the prognosis of the end of pregnancy, increases the risk of maternal and perinatal complications.

6. Prevention of preeclampsia.

6.1. Acetylsalicylic acid 60-100 mg / day, starting with 20 weeks of pregnancy;

6.2. Preparations of calcium 2 g / day (in terms of elemental calcium), starting from 16 weeks of pregnancy;

6.3. Inclusion in the diet of marine products with high content of polyunsaturated fatty acids;

You should not restrict the use of salt and liquids.

7. Permanent antihypertensive therapy does not prevent the development of combined preeclampsia, but may reduce the severity of the latter, as well as the frequency of maternal complications (A). Indications for antihypertensive therapy - see below.

8. The main way of early (timely) detection of the admission of preeclampsia is the careful observation of the pregnant woman.

8.1. Signs of joining preeclampsia:

- the appearance of proteinuria ≥0.3 g / day in the second half of pregnancy (a possible sign);

- the progression of hypertension and the reduction of the effectiveness of previous antihypertensives (likely sign);

- the appearance of generalized edema;

- the emergence of threatening symptoms (severe persistent headache, visual impairment, pain in the right hypochondrium and / or epigastric area of ​​the abdomen, hyperreflexia, oliguria).

9. Monitoring the condition of the fetus.

9.1. Ultrasound study of fetus (embryo) and placenta (chorion) - 9-11 weeks, 18-22, 30-32 weeks.

9.2. Acturology (fetal movement test) - daily after 28 weeks of pregnancy with a note in the diary.

9.3 Research of cellular composition of vaginal smear (hormonal colpositology) - І, ІІ and III trimesters.

9.4. Cardiotocography (after 30 weeks), dopplerography of utero-placental-fetal blood flow, excretion of estriol - by indications.

10. Hospitalization.

10.1. Indications for hospitalization:

- attachment of preeclampsia;

- uncontrolled severe hypertension, hypertensive crisis;

-the appearance or progression of changes in the fundus;

-cerebral circulation disorder;

-coronary pathology;

- heart failure;

- impaired renal function;

-delayed fetal growth;

-the threat of preterm labor.

11. The question about the necessity of termination of pregnancy in the late term is solved by a consultation of physicians with the participation of a cardiologist, an ophthalmologist and, if necessary, other specialists.

11.1 Indications for termination of pregnancy in the late term:

-malignant course of arterial hypertension;

- layering aneurysm of the aorta;

- acute violation of cerebral or coronary circulation (only after stabilization of the patient's condition);

-early adherence to preeclampsia that is not undergoing intensive care.

11.2. The method of termination of pregnancy in the late term on the above indications is abdominal cesarean section.

12. Treatment of arterial hypertension.

12.1. Pregnant women with mild to moderate artetial hypertension (AH) who received continuous antihypertensive therapy before pregnancy, medical treatment after the diagnosis of pregnancy is canceled. Drugs that have a withdrawal syndrome (β-blockers, clonidine) are discontinued gradually.

In the future, the pregnant woman is carefully monitored and informed about the need for daily self-monitoring of blood pressure in the home. The possibility of returning to permanent antihypertensive therapy with drugs that are admissible for use during pregnancy is not excluded.

12.2. Patients with severe AH, vasorenal hypertension, Cushing's syndrome, nodular periarteritis, systemic scleroderma, diabetes mellitus and severe lesion of the target organs continue permanent antihypertensive therapy during pregnancy. If the pregnancy was treated with an angiotensin converting enzyme inhibitor or an angiotensin II receptor blocker, or a diuretic, the patient is "transferred" to another (other) drug whose use is (are) safe for the fetus.

12.3. An indication for the appointment of permanent antihypertensive therapy during pregnancy in patients with chronic hypertension is diastolic pressure ≥100 mm Hg.

If chronic AH is characterized by an increase in predominantly systolic blood pressure (isolated systolic, atherosclerotic, hemodynamic, due to insufficient aortic valve or open arterial duct), the indication for antihypertensive therapy is its level ≥150 mmHg.

12.4 The purpose of antihypertensive therapy during pregnancy is the steady maintenance of diastolic blood pressure 80-90 mmHg. In pregnant women with hypertension, which is characterized by a predominant increase in systolic blood pressure, the aim of treatment is to stabilize the latter at a level of 120-140 mm Hg. (not lower than 110!).

Not recommended:

- restriction of consumption of kitchen salt and liquid,

-reduction of excess body weight before the end of pregnancy;

-physical activity.α

The benefits of bed resting have not been proven, even in cases of joining pre-eclampsia.

12.6. Medicinal treatment.

12.6.9. Categorically contraindicated pregnant angiotensin converting enzyme inhibitors. It is established that they are capable of suppressing the excretory function of the kidney of the fetus, causing malnutrition, and subsequently anhydrous. If the patient constantly receives an angiotensin converting enzyme inhibitor and continues to receive it at the beginning of pregnancy, this is by no means an indication for abortion because the above described side effects are inherent in the use of the drug in the second and third trimesters of pregnancy. However, the patient must "translate" to other antihypertensive drugs immediately after diagnosis of pregnancy (preferably at the planning stage).

13. Decay

13.1. If preeclampsia is not developed and controlled hypertension, pregnancy lasts until the physiological delivery date.

13.3 In the vast majority of cases, birth is due to birth defects.

13.3.1. During childbirth, strict control of blood pressure and cardiac activity of the pregnancy women that controls the condition of the fetus is provided.

13.3.2. Hypotensive therapy begins when AT160 / 110 mm Hg. Art., and it is advisable not to lower the arterial pressure to less than 130/90 mm Hg. Art.

13.3.4. It is advisable to have an analgesia of labor at the 1 st and 2 nd periods of labor (effective prevention of the progression of hypertension). The method of choosing anesthetics - epidural anesthesia. In this case, the impossibility of epidural anesthesia is used by non-narcotic analgesics, sedation, fentanyl.

13.4 Cesarean section is planned in the planned order provided:

-uncontrolled severe hypertension;

-Damage to target organs

-delayed uterine growth of the fetus of gravity.

13.6 In the case of spontaneous labor commencement to the full 34 weeks of pregnancy, the plan for the child is determined by a doctor's consultation, taking into account the state of pregnancy, the condition of the fetus and the obstetric situation.

13.7. The third period of labor is active.

The use of ergometrine and its derivatives in patients with hypertension is contraindicated (B).

**Arterial hypotension and pregnancy.**

This pathology is not a contraindication to pregnancy. However, pregnant women are at risk:

- early gestosis:

- placenta dysfunction

- IUGR (Intrauterine growth restriction)

- Fetal suffering;

- Weakness of labor activity;

- hypotonic bleeding.

**3.3. Disease of blood**

**Anaemia of pregnant is a decline of amount of haemoglobin and red corpuscles. Frequency of anaemia for pregnant of 30-35% and there is a tendency to the increase. At anaemia a basic function - delivery to oxygen is violated to the different organs and tissues, a hypoxia which influences on normal flow of pregnancy and fetus develops. Iron-deficient anaemia appears in 90% of pregnant. Indexes of normal vibrations of Hb are 115-145 gs/of л (11,5-14,5г%) and red corpuscles 3,7\*1012 - 4,7\*1012.**

At iron-deficient to anaemia (IDA) there is a decline of amount of iron in the serum of blood, marrow, high concentration of estrogen hormones, which assists the dyspoiesis of haemoglobin What causes anemia: wrong feed, violation of suction of iron (disease of intestinal highway), vomiting, bleeding, multifetation, lactation, too frequent pregnancies.

**Classification on the degree of weight :**

* mild - Нb 91-110 gs/of л;
* moderate - Нb a 81-91 g/of л;
* severe degree - Hb not below 80 gs/л.

*Clinical features.* The pregnant compains about a weakness, stuffiness and dizziness at insignificant physical effort, dizziness and headache. As a result of diminishing of enzymes iron is included in composition of which, observed there are trophic violations (psilosis, change of taste, fragility of nails). The some pregnant do not express at presence of anaemia of complaints. There is a pallor of skin covers and scleras at a review. Sometimes there is subfebrile temperature. At anaemia there are scray changes for the increase of oxygenation of tissues: increase of volume of plasma, cardiac extrass and speed of blood stream. At an auscultation above the apex of heart hearkened to systolic noise. There is the frequent breathing. Almost in half with anaemia arterial low blood pressure is determined. A liver and spleen at IDA is not megascopic. The diagnosis of IDA is based on the changes of next indexes is a decline of Hb below 115 gs/of л, diminishing of content of iron in blood of to 10,7 mmol/l, decline of Ht less than 33%, colour index below 0,85. There is less of red corpuscles, anisocytosis is norm or amount them increased. IDA is increased always. For pregnant from IDA the gestosiss of the second half of pregnancy develop often, in 15-42% is terminating pregnancy in different terms, often there is a high water-level, fetal placental insufficiency (FPI), hypoxia of fetus, IUGR. Labor at every third case at anaemia become complicated ill-timed outpouring of amniotic fluid, weakness of labor (15%), by the increase of blood loss in labor - in 10%. In this connection labor must be conducted actively with the prophylaxis of weakness of childlabor, asphyxia of new-born, bleeding in an early puerperium. Even insignificant blood loss is badly carried by women and can result in a collapse. A puerperium can become complicated by septic diseases in 12%. Anemia can result in a hypoxia, oligotrophy and development of anaemia of fetus. For children, born from mothers with anaemia, often there is oppression of erythrogenesis.

Treatment: rational feed (meat, liver, bread, is leguminous, soy-bean, dill, parsley). Day's ration must contain albumens to 120г (50% of animal origin), limitation of fats to 70г on twenty-four hours and carbohydrates to 350-400г. apply medications of iron, vitamins, other medications. Most effective are medications of iron supply. To apply medications of iron better in all with ascorbic acid. Unrationally to apply at IDA medications which stimulate an erythrogenesis (folicacid, vitamin of В12). It is necessary to remember that an effect from treatment comes not early than as in 3 weeks. Blood transfusion is not conducted in connection with an of short duration effect and immunization of pregnant. Prophylaxis: early exposure and timely hospitalization, treatment.

*Megaloblast anaemia* **-** it anaemia at which is violated ripening of cages of red row, conditioned by the deficit of vitamin of В12 or folic acid. Typical for such anaemias is a presence in marrow of megaloblasts, reason of increase of which is a dyspoiesis of DNA. В12-anaemias are hyperchromatic, characterized by the atrophy changes of tongue, gullet, stomach, changes of the nervous system. The deficit of vitamin of В12 can be constrained from disorder of absorbtion (atrophy changes of mucous membrane of stomach), by the invasion of helmints, inherited violations of hemopoesis. A clinic consists of anaemic syndrome, violations, changes of the nervous system (feeling of crawl of ants, numbness of extremities, violation of deep sensitiveness). For a blood test characteristic presence of hyperchromatic anaemia, macro- and anisocytosis of red corpuscles, diminishing of amount of leucocytes, moderate hyperbilirubinemia. In marrow megascopic amount of megaloblasts.

Treatment: diet (meat, eggs, milk, liver, kidneys), vitamin of В12 (100-200 мг/twenty-four hours, in/a m, folic acid 5-15 мг/twenty-four hours, vitamin of С to 100 мг/twenty-four hours). Day's requirement of pregnant in folic acid is 300-mcg (for unpregnant she is 100мкг). The depot of folic acid in the organism of man is absent, and the exchange of her very unstable, that is why the deficit of her at pregnancy arises up very quickly. A wrong feed, frequent pregnancies, protracted reception of hormonal contraceptives, assists it. Hyperchromatic anaemia is 1% from all cases of anaemias. For this form not the typical is expressed clinical flow (Hb within the limits of a 80-100 g/of л). Treatment to iron of effect medications is not given. A clinic is expressed in absence of appetite, characteristic vomiting, diarrhea, burning of tongue. There can be signs of hemorragic diathesis of skin, mucous membrane, scleras. There is an increase of spleen, fervescence. There is a decline of amount of red corpuscles in blood, in the strokes of blood is a presence of megalocitosis, anisocytosis and grittiness and nuclear forms of red corpuscles. The amount of RBC is diminished. The amount of leucocytes increases from to the left. An early sign is a presence of the hypersegmented leucocytes. At pregnancy there can be next complications: wilful abortions, anomalies of development of fetus, complication of labor. A prophylaxis and treatment of anaemia consist in a valuable feed (green goods and fetus, meat foods, milk, nuts), setting of medications of folic acid (5-15mg/day), vitamin of С to 100 mg/day.

Hypoplasticanaemias - it a disease at which is observed acute oppression of hematogenesis. The hypoplasia of hematogenesis arises up at the action of external factors: action of ionizing radiation, use of some medicinal medications and chemicals. It is important have chronic infections - hepatitis, pyelonephritis. On occasion reason is self-aggression against to the antigen of cages of marrow. Consider that pregnancy is the possible etiologic factor of development of immune conflict.

A clinic consists of three syndromes:

anaemic syndrome;

hemorragic syndrome;

septic syndrome.

The picture of blood is characterized by the expressed anaemia: Hb goes down a to 50 g/l relative lymphocytosis.

In bone marrow almost complete absence of elements and substituting for them takes place by fatty fabric. There is an increase of content of iron in the serum of blood which results in the hemosiderosis of organs and tissues. The flow of disease is various. On occasion rapid progress of disease. A death rate is 60,5%; in another cases a disease runs across with periodic remissions, complete recovery is possible.

*Treatment: blood tranfusion, prednizolone, splenectomy, transplantation of allogenic marrow. Combination of anaemia with pregnancy is observed very rarely. Prognosis for the mother is unfavorable, lethality is observed at 45% cases.*

In case of occurring of disease during pregnancy (more frequent in the second half), clinical displays appear quickly: Hb 80-38 gs/of л, low platelets 45\*109/л. There are signs of hemorragic diathesis. The flow of disease is very heavy, possible death of mother. At breaking to pregnancy there can be hearths of necrosis in the place of operation. If pregnancy comes for a sick woman, then there is intensifying of process. At the exposure of anaemia it is necessary to set her character and hemophthisis, terminating pregnancy is conducted in early terms. As it is quicker all necessary to conduct a splenectomy. If a woman renounces terminating pregnancy it is necessary to conduct dynamic control after the indexes of blood. Worsening of the state of pregnant (Hb of 60г/л, amount of leucocytes less than 1,5\*109/л, less than 20%, proof relative lymphocytosis (anymore 60%), origin of hemoragias, infectious processes) forces to conduct terminating pregnancy.

**Hemolytic anaemia**

The inherited anaemias are constrained from the impairment structure of membranes of red corpuscles, by violation of activity of enzymes and synthesis of hematohistone. Immune anaemias are related to operating of autoantibodies on red corpuscles. Thus there is diminishing of amount of red corpuscles. The level of bilirubin rises in blood, an icterus appears for patients. Most often at pregnancy there is (due to defect of structure of membrane to the red corpuscles) hemolytic anaemia. The defect of membrane assists penetration in the red corpuscles of water. The spherical form of red corpuscles assists the increased destruction of red corpuscles in a spleen. A basic syndrome is hemolytic (icterus, anaemia). A bilirubin at intensifying rises to 102-119 мкмоль/л. There is an urobilinuria.. The picture of blood is characterized by the presence of microspherocytosis, decline of osmotic of red corpuscles, clasmocytoma.

A disease has cyclic flow. Intensifying more frequent arise up at infectious at pregnancy.

*Treatment. Blood transfusion is shown only at considerable анемізації. Most effective at treatment of this anaemia is surgical treatment - splenectomy.*

**Auto-immune anaemia** arise up at formation of antibodies to the own red corpuscles at violations in the immunocompetency system. Distinguish symptomatic (at system red lupus, heterospecific ulcerous colitis, chronic hepatitis) and due to unknown reason anaemias.

The clinic of anaemia is characterized by the presence of weakness, pain in area of heart, stuffiness, palpitation, icteruses. There is unbearableness of cold at this form of anaemia.

At acute crises content of haemoglobin arrives at subzero numbers. The amount of immature RBC rises mildly. A reliable laboratory test is a test of Kumbs.

The most effective treatment of anaemia is application of steroids. For liquidation of the phenomena appoint the large doses of prednizolone (from 50-60 to 80 мг/day). At the heavy intensifying blood transfusion is recommended after an individual Also indicated splenectomy.

At pregnancy in combination with anaemia. Often there is a threat of terminating pregnancy. A prognosis is for the mother of good. The artificial breaking of pregnancy is not shown.

*Treatment is conducted with the use of prednozolone in the dose of 80mg/day., blood transfusions until normalization of indexes of blood. A dose is reduced in future, a support dose (10-15mg/day) is recommended. Labor it is recommended to conduct conservatively. During labor the dose of prednizolone it follows to increase.*

**Leucoses are malignant diseases of hematogenesis tissue**

**Classification:**

1. Lymphoblastic.
2. Myeloblastic.
3. Monoblastic.
4. Prometrin.
5. Erythroblastic
6. Plasmoblastic.
7. Megacaryoblastic.

**Syndromes:**

1. Hyperblastic (increase of lymphatic knots, liver, spleen).
2. Hemorragic (diffuse bleeding).
3. Anaemic.
4. Intoxication.

The separate forms of leucosis differentiate only tissue researches.

Pregnancy worsens the state of patient (not how many pregnancy, how many her completions), often becomes complicated by abortions.

At a acute leucosis necessarily to terminate pregnancy in the first trimester. In the second trimester of terminating pregnancy it is better to conduct conservatively. At development of acute leucosis at the end of pregnancy and compensated state of patient is a temporizing tactic/pl and conduct of labor conservatively.

**Thrombocytopenia is a decline of amount of thrombocytes, related to the increased destruction, necessity and their insufficient education.**

There is destruction of thrombocytes most frequently. Distinguish to the inheritance and the purchased forms. There is a change of functional properties of thrombocytes at the inherited form. It is divided into immune and related to the action of factors.

In basis of pathogeny a disease lies insufficient amount of thrombocytes and diminishing of components is related to it in the displacing system of blood. It is known that an important role is taken in the system to hemostasis to the thrombocytes.

At platelets insufficiency arises up as a result of the increased fragility of vessels, so as a result of exit of red corpuscles from a vascular river-bed through capillaries. The sanguifluousness appears at the decline of amount of thrombocytes to 50\*109/л (normal content is from 150\*109/л of to 400\*109/л).

Clinically it shows up as rash on front of feet, trunk. Often there are hemorrhages in the places of injections, at the insignificant damage of vessels (measuring of arteriotony, , grinding of skin covers).

The amount of thrombocytes diminishes in peripheral blood, factors of hemopexis in a norm, and their increase is possible. Bleeding time is prolonged. Broken retraction of faltung. In marrow megascopic amount of megacaryocytes. A diagnosis is set on the basis of characteristic clinical signs and indexes of blood.

A flow of disease can be acute and chronic recrudescent.

Nosotropic treatment consists of the use of steroids and splenectomy. If an effect from these measures is not observed, then immunodepressants are used. Treatment immunodepressants during pregnancy contra-indicated. Combination of this and pregnancy is often enough. Flow of pregnancy and labor depends on the form of disease and character of treatment which was preceded to pregnancy. During pregnancy, intensifying of anaemia is unoften. Sometimes intensity of symptoms of disease diminishes during pregnancy. Some authors consider that intensive bleeding during pregnancy and it is not arisen up up to labor. Pregnancy is contra-indicated at:

1. To the acute form.
2. Bleeding is from a nose and gums.
3. A hemorrhage is in a brain.
4. A chronic form is with frequent recidives.

**3.4.Diseases of the respiratory organs**

Acute bronchitis - develops as a result of an infectious, viral impression of the bronchi in case of overheating of the body. During pregnancy, intrauterine infection of the fetus is possible.

Treatment: In the first trimester - the penicillin number.

In the second trimester - you can use the means of the group cephalosporins.

Chronic bronchitis is not a contraindication to pregnancy.

Bronchial asthma. This disease during pregnancy may have a different clinical picture. So in the first trimester the progress of bronchial asthema worsens, in the second trimester - improves due to an increase in glucocorticoids fetoplacental origin. In the first trimester of pregnancy, symptoms of bronchial asthma may appear for the first time and disappear in the process of progression of pregnancy (a separate form of early gestosis).

Treatment of bronchial asthma attack is carried out:

- β-adrenomimetics (salbutamol, bikanil, berotek, isadrin) in inhalation form (1-2 breaths)

- Subcutaneously injected 5% -1 ml. solution of ephedrine, or 0.05% -1 ml.

- glucocorticoids 100 mg. I / O

Adrenaline is contraindicated in pregnant women (with the exception of anaphylactic shock).

In the development of women with bronchial asthma, the use of prostaglandins F2α is contraindicated.

Contraindications to carrying pregnancy with respiratory diseases are respiratory failure of III-IV degrees (by Votchalu), in the event of this complication in childbirth - a powerful period to exclude obstetric forceps.

Tuberculosis and pregnancy.

Impressions for abortion (up to 12 weeks):

- fibro-cavernous pulmonary tuberculosis.

- active form of tuberculosis of the spine, pelvis, especially with the formation of abscess or fistula.

- Bilateral tuberculosis of the kidneys.

- resistant forms with frequent relapses.

- Condition after pulmonectomy in the presence of a specific process in a single lung.

- active pulmonary tuberculosis in combination with diabetes mellitus, heart disease.

Planned hospitalization of pregnant women is carried out:

- Up to 12 weeks to decide on the issue of pregnancy delivery

- 26-32 weeks due to increased cardio-pulmonary load

- 36-37 weeks for prenatal preparation.

The second period of childbirth is excluded by obstetric forceps:

- in the fibrous-cavernous form of the process

- with cardio-pulmonary insufficiency

Breastfeeding of newborns is contraindicated in BC (+).

Treatment process is carried out by specific means.

**3.5. Pregnancy and kidney disease**

Pregnancy contributes to kidney disease due to urodynamic disorders due to the following factors:

- hormonal changes;

- rotation of the uterus to the right;

- Hypotension and expansion of the cup-loch system;

- an increase in the frequency of bladder-ureteral reflex;

- pathological mobility of the mink;

- presence of varicose veins of the right ovary.

Infection penetrates the urinary tract:

- ascending (from the bladder)

- lymphogenous (from the intestine, especially with constipation)

- hematogenous (with various infectious diseases)

Pathogens:

- E. coli;

- gram-negative enterobacteria;

- Pseudomonas aeruginosa

- Protect;

- enterococci;

- Staphylococcus aureus;

- streptococcus;

- Candida type mushrooms.

Clinical forms of diseases:

- pyelonephritis

- hydronephrosis;

- asymptomatic bacteriuria;

- glomerulonephritis;

- kidney tuberculosis;

- urolithiasis;

- abnormalities of urinary tract development.

Pyelonephritis.

Frequency 6-12%. Influence on the course of pregnancy and fetus:

- hypertensive disorders in pregnant women;

- miscarriage of pregnancy;

- intrauterine infection of the fetus;

- IUGR

Influence on pregnant and expectant women:

- acute renal failure;

- urosepsis, septicemia.

Pregnancy, in which pyelonephritis occurs more often:

- 12 - 15 weeks

- 24- 29 weeks

- 32-34 weeks

- 39-40 weeks.

In the postpartum period - 2-5, 10-12 days.

Classification of pyelonephritis by clinical course:

- sharp;

- chronic;

- latent;

- exacerbation of chronic;

- gestational

Acute pyelonephritis is accompanied by the following clinical symptoms:

- headache;

- increase in body temperature;

- pain in the lumbar region;

- high sweating;

- pain in the course of the ureter;

- forced position on the side with reduced lower limbs;

- Pasternatsky positive symptom;

- changes in urine, blood.

Chronic pyelonephritis periodic pains in the lumbar region, in the urine the amount of leukocytes is increased.

Differential diagnosis is performed with acute appendicitis, cholecystitis, renal and hepatic colic.

Treatment:

- is carried out according to the general principles of inflammatory processes under the control of seeding and antibiotic sensitivity taking into account the period of pregnancy;

- detoxification therapy;

- Antibiotics and sulfanilamides up to 10 days;

- antispasmodics: urolissan, kanafron.

Ineffective treatment - catheterization of the ureter, and in the event of a threat to urosepsis, stenting of the renal pelvis, nephrostomy.

Decay is carried out through natural ways.

Contraindications to pregnancy (according to the old recommendations):

- pyelonephritis of a single kidney;

- chronic renal insufficiency.

Glomerulonephritis. Frequency from 0.1 to 9%. This is an infectious-allergic disease that promotes immunocomplex effects of kidney glomeruli. Pathogen hemolytic streptococcus (angina, influenza)

Classification:

- nephrotic;

- hypertonic;

- mixed;

- latent.

The most favorable course of pregnancy, childbirth and postpartum period is observed with latent form.

The treatment is consistent with the nephrologist (antibiotics, antihypertensive, peripheral vasodilators, hypotensive, desensitizing).

Contraindications to pregnancy:

- acute glomerulonephritis;

- chronic glomerulonephritis in the stage of exacerbation with significant hypertension;

Asymptomatic bacteriuria.

With asymptomatic bacteriuria, acute pyelonephritis develops in 25%, so this condition is treated with antibiotics of the penicillin number.

Urolithiasis.

Frequency of 0.1-0.2% of pregnant women and prolonged.

For the clinical course characteristic triad of symptoms:

- back pain;

- hematuria;

- departure of concrements.

Diagnosis based on clinical symptoms and ultrasound.

Treatment:

- antispasmodics;

- analgesics;

- catheterization of the ureter, in the absence of effect - surgical treatment.

Abnormal kidney development and pregnancy:

- kidney dystopia;

- doubling of the kidney;

- aplasia of one kidney;

- horseshoe kidney;

- polycystic kidneys;

Pregnancy is contraindicated in this pathology in the event of significant impairment of the function of these organs and in polycystic kidneys. If the kidney is in a small pelvis - Caesarean section.

**3.6. Diseases of the endocrine system**

**Prevention of pregnancy in patients for diabetes mellitus**

Diabetes mellitus is a syndrome of chronic hyperglycemia caused by absolute or relative insulin deficiency, which leads to an impairment of all types of metabolism, vascular lesions (angiopathies), nerves (neuropathies), many organs and tissues.

Classification:

1. Type:

- type 1;

- type 2.

2. Degree of gravity:

- light;

- average;

- heavy.

3. Compensation status:

- compensation;

- subcompensation;

- decompensation.

4. Complications:

4.1. Sharp:

- ketoacidtic coma;

- hyperosmolar coma;

- laccidemic coma;

- hypoglycemic coma.

4.2. Chronic (Late):

Microangiopathy:

-nephropathy;

-retinopathy;

- microangiopathy of the lower extremities.

Macroangiopathy:

- coronary heart disease;

- ischemic brain disease;

- macroangiopathy of the lower extremities;

- others.

Neuropathy

Defeat of other organs:

- diabetic cataract;

- hepatopathy;

- enteropathy;

- osteoarthropathy;

-other

Diagnosis. During pregnancy is not carried out. The diagnosis is finally established before pregnancy.

Specialized medical care:

1. In the first trimester of pregnancy:

1.1. Detailed examination of the history of the disease, in conjunction with the endocrinologist, the patient is examined, a comprehensive examination is prescribed: glycemia on and after eating, daily glucosuria, acetonuria, concentration of glycosylated hemoglobin A1C; indicators of kidney function, eye contour examination.

1.2. The question of the possibility of pregnancy is resolved.

1.2.1. Contraindications to pregnancy (up to 12 weeks):

- diabetic nephropathy of IV or V stage for Mogensen;

- clinical manifestations of diabetic macroangiopathy (ischemic heart disease, ischemic brain disease, ischemia of the lower extremities);

- coma or preomatous condition in the first trimester;

- concentration of glycosylated hemoglobin A1C in the first trimester> 10%.

1.3. Patients with type 2 diabetes are discarded by oral contraceptives and prescribed human insulin in a cartridge form.

1.4. Patients with type 1 diabetes are "translated" from insulin of animal origin into human insulin, a correction (usually, reduction) of a dose is made.

1.5. An ultrasound is conducted in 10-12 weeks.

Terms of hospitalization of pregnant women with diabetes:

I hospitalization - up to 12 weeks

II- 22-24 weeks

III- 36-37 weeks.

2. In the second trimester (see algorithm):

2.1. Criteria for Compensation of Carbohydrate Metabolism:

- normoglycemia onset (3.3-5.6 mmol / l);

- normoglycemia during the day (up to 8.0 mmol / l);

- absence of hypoglycemia;

- absence of acidosis.

2.2. Planned hospitalization in 22-24 weeks of pregnancy for correction of insulin therapy, detection of signs of delayed fetal development or diabetic fetopathy, prevention of polyhydramnios, preeclampsia, infectious complications.

2.3. Indications for immediate hospitalization:

- decompensation of carbohydrate metabolism;

- progression of vascular complications;

- arterial hypertension;

- renal failure;

- complications of pregnancy (threat of interruption, polyhydramnios, pre-hypertension);

- disturbance of the fetus.

2.4. Signs of diabetic fetopathy:

- increase in the rate of weekly increase in the average diameter of the abdomen up to 3.6 mm or more;

- increase in the rate of weekly growth of the average diameter of the chest to 3.4 mm or more;

- increase in hourly urinary excretion by the fetus to 7.6 ml or more.

3. In the third trimester:

3.1. Monitoring of the fetal condition in the hospital - ultrasound every 2 weeks; cardiotocography weekly, actuography twice a day.

3.2. Signs of diabetic fetopathy:

- double contour of the head;

- double contour of the body;

- richheaded;

- macrosomia (at normal head sizes).

3.4. The evaluation of fetal lung maturity is performed by the need for premature delivery or delivery of a patient with poor diabetes compensation by determining the ratio of lecithin / sphingomyelin, palmitic acid / stearic acid and the presence of phosphatidylglycerol in the amniotic fluid obtained by transabdominal amniocentesis.

Decay

1. Indications for a planned caesarean section:

- "fresh" hemorrhages in the retina;

- preeclampsia of moderate or severe severity;

- fetal hypoxia;

- pelvic presentation;

- Fetal weight> 4000 g.

2. Contraindications to the planned cesarean section are diabetic ketoacidosis, precomatous condition, coma.

3. Rhododendiazation at a sufficient maturity of the cervix begins with amniotomy and is performed by intravenous drip administration of oxytocin (5 OD) or prostaglandin E2 (5 mg) dissolved in 500 ml of 5% glucose.

4. Glycemic control during labor is done every hour.

5. Fetal monitoring is monitored.

6. Anesthetics of labor activity - epidural anesthesia.

7. Careful monitoring and correction of arterial pressure.

8. The withdrawal of the head is carried out in the interval between the attempts, so that the birth of the shoulder girdle coincided with the next power.

9. In the absence of full disclosure of the cervix within 8 hours, the issue of the termination of delivery by caesarean section is solved.

Treatment.

4.3. The purpose of insulin therapy during labor is maintaining glycemia in the range of 4.5-7.5 mmol / l.

4.4. Short-acting insulin (subcutaneous or intravenous) and infusion of 5% or 10% glucose are used to correct glycemia during labor or cesarean section.

Gestational diabetes is a disturbance of glucose tolerance of any degree that arose (or was first detected) during pregnancy.

2. Diagnostics (see algorithm).

2.1. Risk factors for gestational diabetes:

- diabetes in relatives of the first degree;

- gestational diabetes for the previous pregnancy;

- obesity (> 120% of ideal body weight);

- richheaded;

- obsessive-compulsory anamnesis:

- large fruit (> 4000 g);

- stillbirth;

- congenital malformations of the fetus;

- glucosuria (set twice or more).

2.2. The indication for an immediate examination of gestational diabetes, in addition to the presence of risk factors, is glycemia in the onset: in the plasma of venous blood  5.83 mmol / l, in the whole capillary blood  5.0 mmol / l (A).

2.3. The technique of the hourly test of glucose tolerance of thyroid-tropic hormone (TTG) with a load of 50 g: at any time, not necessarily on the nose, the pregnant woman is given a solution of 50 g of glucose in 200 ml of water, after 1 hour the glycemia is determined in plasma of venous blood.

2.4. Technology three-hour glucose tolerance test with a load of 100 g morning on an empty stomach (last meal at least 12 hours) in a peripheral vein installed catheter and taken blood to determine blood glucose is given to drink a solution of 100 g of glucose in 250 ml water with adding lemon juice, the blood for the determination of glycemia is taken after 1, 2 and 3 hours. During the study pregnant woman should be in a state of rest (sitting or lying) and not eat, can drink water.

2.5. Normal values ​​of glucose concentration (mmol / l) in plasma of venous blood of pregnant women at three-hour TTG with 100 g glucose:

nascha <5.83;

1 year <10.55;

2 years <9.16;

3 years <8.05

3. Treatment (see algorithm).

3.2. Insulin therapy.

3.2.1. Appointments are made only in the conditions of the hospital.

3.2.2. Used only human insulin in a cartridge form (introduced with a syringe pen).

3.2.3. Before the first introduction, an intradermal test is performed.

3.2.4. Patients are trained in self-control of glycemia.

3.2.5. Start with the appointment of small doses of insulin of short duration (2 - 4 units) for 20 minutes. in front of the main meals. Control glycemia in onset and postprandial (after 1 hour), adjusting the dose of insulin. If glycemia is sustained in venous blood plasma  5.83 mmol / L (or in the capillary blood  5.0 mmol / L), an additional insulin injection of median duration (half an hour of insulin) is prescribed before bedtime.

3.2.6. The criteria for the effectiveness of therapy for gestational diabetes (compensation) are: normoglycemia onset and during the day, including after eating, the absence of ketosis and episodes of hyperglycemia.

4. Tactics of pregnancy and childbirth.

4.1. If necessary, the correction of insulin therapy and the absence of obstetric complications of the patient are hospitalized to the endocrinologic department.

4.2. In case of complications (pregnancy hypertension, preeclampsia, polyhydna, fetal hypoxia), treatment is carried out in a special department of extragenital pathology of pregnant women.

4.3. The most appropriate methods for monitoring fetal status are acturology and the determination of the biophysical profile.

4.3.1. Acturology - counting the number of fetal movements in the pregnant woman for an hour in the morning and in the evening.

4.3.2. Biophysical profile of the fetus - Definition during ultrasound and cardiotocography (non-stress test) of fetal movements, tones of the heart, reactivity, respiration and volume of amniotic fluid.

4.4.3. If necessary, the patient's degeneration in a period of less than 37 weeks evaluates the maturity of the fetal lungs.

4.4.4. If necessary, pre-natal preparation of the cervix is ​​performed with prostaglandin E2 medications locally.

**3.7.Pregnancy in women with digestive system disease.**

During pregnancy, due to neurohumoral and anatomic-topographical changes, there are violations in the secretory and motor activity of the stomach, intestine, bile duct system:

- Cardiac failure

- gastro-esophageal reflex;

- Dissertation of the gallbladder and biliary tract;

- constipation

Disease of the esophagus.

Achalasia cardia is a neuromuscular disease, a violation of the passage of food as a result of the absence of a reflex opening of the lower sphincter of the esophagus during swallowing.

Treatment - Cardiopulmonary expansion with cardioverter. In the absence of the effect-interruption of pregnancy.

Hernia of the apex of the esophagus.

The most commonly occurring axial hernia in many pregnant women, as well as excessive vomiting, extending after 15-16 weeks. With large axial hernias of degeneration by Caesarean section.

Diseases of the stomach and 12 duodenum.

During pregnancy these diseases are often in the stage of remission, caused by hormonal reorganization and decreased gastrin formation. In the event of an exacerbation (more often in the first trimester), during treatment, H-2 blockers, bismuth medications are not prescribed.

Perforation of the ulcer of the stomach and 12 gastrointestinal tract is accompanied by a wiped out clinical picture, especially in long terms of pregnancy. Treatment is operational.

Intestinal Diseases.

Colitis due to dyskinesia of the large intestine due to squeezing it in the pregnant womb and weakening of the peristalsis due to hormonal disorders. Clinically, this is manifested by constipation, rarely diarrhea. Treatment is done by nutrition and phytotherapy.

Crohn's disease (granulomatous ileokolit) is inflammation of the terminal division of the small intestine. Clinic: pain in the abdominal cavity and diarrhea.

Pregnancy with this pathology is permissible in the presence of stable remission. Aggravation of the process is an indication for abortion.

**4. Control questions**

1. Aquired defects of heart. Conduct of pregnancy and labor.

2. Congenital defects of heart. Conduct of labor.

3. What changes of blood are characteristic for women with physiology pregnancy?

4. Anaemias of pregnants.

5. Clinic, diagnostics of different forms of anaemias pregnant.

6. Treatment of anaemias of pregnant.

7. Who of pregnant belongs to the group of high risk?

8. A conduct of labor is at anaemias.

9. Leucosis. Classification.

10. Conduct of pregnancy, labor.

11. Symptomatology of leucosis.

12. Thrombocytopenia. Forms, clinic, diagnostics.

13. Conduct of pregnant, labor at thrombocytopenia.

14. Peculiarities of the course of diseases of the respiratory organs during pregnancy

15. To give determination: to the pyelonephritis, glomerulonephritis, urolithiasis.

16. Etiology: to the pyelonephritis, nephrite, glomerulonephritis.

17. The pregnant have classification of disease of kidneys.

18. Clinic: pyelonephritis (different forms), glomerulonephritis (different forms), urolithiasis.

19. Determination of risk group: at a pyelonephritis, glomerulonephritis.

20. The pregnant have features of flow of disease of kidneys.

21. Features of flow of pregnancy are at the diseases of kidneys.

22. Features of flow of labor are at the disease of kidneys.

23. Features of conduct of pregnancy, labor, puerperium, period of new-bornness are at the diseases of kidneys.

24. Treatment of disease of kidneys at pregnancy and in post-natal

25. A diabetes mellitus is pathology of carbohydrate exchange.

26. The pregnant have diagnostics, clinic and treatment of diabetes mellitus.

27. Contraindications to continuation of pregnancy for patients by a diabetes mellitus.

28. The pregnant have obstetric complications with a diabetes mellitus.

29. Methods of labor of pregnant are at a diabetes mellitus.

30. The pregnant have diagnostics, clinic and treatment of diabetes mellitus.

31. Contraindications to continuation of pregnancy for patients by a diabetes mellitus.

32. The pregnant have obstetric complications with a diabetes mellitus.

33. Methods of labor of pregnant are at a diabetes mellitus.

34. A conduct of pregnancy and labor is at the diseases of thyroid.

**5. Methodical materials:**

5.1. Materials to control of base preparation of students: situational tasks.

5.2. Materials for the methodical providing of the basic stage of employment: tool of maternity hospital, history of labor.

5.3. Materials for the final stage of employment: clinical situational tasks.

5.4. Materials for the methodical providing of self-study of students in the corresponding methodical pointing for independent work.

 **Task № 1.** Multipara 27 years at pregnancy 36 weeks entered a term maternity unit with regular fights, that began 6 hours to the volume. It was ill a quinsy. From 16 years is on "Д" of account in connection with the defect of heart. Obstetric anamnesis is without features. Under surveillance of district accoucheur in woman consultation since from 8 weeks of pregnancy. At the beginning and at the end of pregnancy was on prophylactic stationary treatment. Objectively: In the lungs of the vesicular breathing. A liver is not megascopic. Spleen is not palpated. The symptom of Pasternatskyi is negative on either side. In 20 minutes after amniotic waters released and beginning of pushing efforts a living boy was born by mass of 2450г, long a 44 cm. After labor of child the state of породіллі became worse acutely, a skin had gone by pale, sticky sweat appeared, a pulse became more frequent, weak filling and tension, BP - 90/50 мм.рт.ст. Consciousness is stored. Diagnosis? Reason of worsening of the state of woman is after labor of child. How to prevent this complication.

**Task. №2.** Unit of pathology of pregnant the pregnant entered, pregnancy And, 27 weeks with complaints about a fervescence to 380С, chill, pains in a lumbar area. Objectively: skin of гіперемована, the symptom of Пастернацького is acutely positive on the right. An uterus is easily excitative. Your diagnosis? Appoint treatment.

**Task № 3.**To the doctor of perinatologist the pregnant appealed concerning registering. Pregnancy And, 7-8 weeks. Hypertensive illness of ІІа of century. In what terms of потібно to hospitalize pregnant in what permanent establishment?

**Task № 4.** Pregnant 20 years old with glomerulonephritis from childhood. In the term of 8 weeks there was an aggravation of the pathological process.

Methods of tracking? Tactics of a doctor.

**Task № 5.** First-time in the term of 6 weeks, died of rubella, on account of pregnancy became 8 weeks.

Diagnosis? Tactics of a doctor.

**Task № 6.** Pre-pregnancy in the term of 8 weeks became on the dispensary record with heart disease, 5 years ago, commissurotomy was conducted on the stenosis of the internal valve. Pregnant is disturbed by shortness of breath, tachycardia with insignificant physical activity.

Methods of examination. Tactics of an obstetrician-gynecologist.

**Task № 7.** At the maternity ward came the maternity ward with active maternity during the full-term pregnancy, suffering from a defect between the atrial fibrillation. Pulse 88 in 1 min, AT 120/70 mmHg, breathing 16 in 1 min, skin and visible mucous membranes of pale pink color. Vaginal examination: the opening of the cervix is complete, the head fills 2/3 of the sacrum and womb.

Obstetric tactics?

**Task № 8.** A pregnant woman 30 years old, has come to a maternity activity. The term is 38 weeks. Complaints on headaches. Blood pressure was always 140/90 mm Hg, no edema, no protein in the urine was detected. Upon receipt, the state is satisfactory, AT 160/100 mm.rt.st. Vaginal examination: opening of the cervix by 6 cm, full bladder, head filling 1/3 of the womb and sacrum.

Diagnosis, treatment and delivery plan.

**Task № 9.** Repeatedly in the period of 10-11 weeks, 27 years old, suffering from diabetes mellitus, severe form, diabetic proliferative retinopathy. I pregnancy was interrupted a year ago due to decompensation of the disease.

What is an obstetric tactic? Deontological practice.

**MCQs** (correct answers highlighted)

1. Gravida 1, 19 years of age, term of gestation – 11 weeks. Patient complains of palpitation, irritability, whine, loss of body weight. Objectively: skin and visible mucous membranes of usual color. Arterial pressure – 120/70 mm Hg., pulse rate – 108 beats/min, does not change during sleep, systolic murmur is heard. Heart borders without changes. ECG readings: vertical position of electric axe of the heart, sinus tachycardia, insignificant hypertrophy of the left ventricle. No pathologic changes in clinical analyses of blood and urine. Define the most probable cause of patient’s state.

A. Disease of the thyroid gland

B. Congenital heart defect

C. Active phase of rheumatic process

**D. Adaptation to pregnancy**

E. Developed heart defect

2. Gravida, term of gestation – 31 weeks. Patient complains of pain in the lower abdomen, mostly – in the right, appeared at 05 a.m., nausea, single vomiting, arterial pressure – 125/80 mm Hg., pulse rate – 76 beats/min, rhythmic. On palpation of the anterior abdominal wall pains in the right side, mostly – in the iliac area. Symptom of peritoneal irritation is positive. Uterine body is enlarged to 19 weeks of gestation, on palpation – in the normal tonus. Vaginal discharge is mucous, moderate. Blood analysis: leucocytes -16x109 g/l, stab neutrophils – 15%. Urine analysis – without changes. What is the initial diagnosis?

A. Threat of pregnancy interruption

B. Renal colic during pregnancy

C. Cholecystitis during pregnancy

**D. Appendicitis during pregnancy**

E. Abdominal form of preeclampsia

3. Gravida with bronchial asthma, term of gestation – 30 weeks, after stress situation suddenly developed attack of suffocation. Loud wheezing respiration, cyanosis of the face. On auscultation: respiration is weakened, a lot of dry wheezing rales. On percussion: bandbox resonance. After the attack a small amount of viscous sputum appeared. What is the initial diagnosis?

A. Thromboembolism of the pulmonary artery

B. Lung abscess

C. Obstructive bronchitis

D. Acute pneumonia

**E. Attack of bronchial asthma**

4. Primigravida, 24 years old was admitted to the maternity hospital. Course of pregnancy – without any complications. Pelvic sizes: 26-28-30-20. Cephalic presentation, fetal head is pressed to pelvis inlet. Fetal heart sounds are rhythmic, 136/ beats/min. First period of term labor. A year and a half before patient underwent heart surgery – mitral comissurotomiy with positive result. What is further tactics of labor management?

**A. To exclude II period of labor**

B. Cesarian section

C. Labor management through natural maternal passages

D. Early amniotomy

E. Vacuum-extraction of the fetus

5. Primigravida, 27 years old suffers from pyelonephritis of the single kidney. Referred to prenatal care clinic complaining of menstruation delay during 2,5 months. On examination: 11 weeks of gestation was revealed. Clinical analysis of urine: protein – 3,3g/l, leucocytes cover the whole field of vision. What is your tactics of pregnancy management in such a case?

**A. Interruption of pregnancy**

B. Interruption of pregnancy after normalization of urine findings

C. Prolongation of pregnancy till 36 weeks term

D. Interruption of pregnancy in the term of 24-25 weeks

E. Prolongation of pregnancy to full-term one

6. Secundipara, 32 years old complains of episodic loss of consciousness, spontaneous syncopes, which disappear in changing of body posture. Syncope may be followed by bradicardia, passes quickly. Other systems and organs – without deviations. To your opinion, what is the most probable cause of such a state?

A. Psycho-somatic disorders

B. Elevation of pressure in the veins of upper extremities

D. Decrease of pressure in the veins of upper extremities

C. Vegetative-vascular dystonia by cardiac type

**E. Syndrome of compression of inferior vena cava**

7. Pregnant woman with regular labor activity was delivered to maternity hospital by ambulance. Term of gestation – 35-36 weeks. Longitudinal fetal position, cephalic presentation, fetal head is pressed to the pelvic inlet. Probable fetal mass – 3500,0 +-200,0gr. Heart sounds are rhythmic, 136 beats /min. On examination: glucose content in the blood – 11 mmol/l. On internal obstetric examination: uterine cervix is shortened up to 1,0cm, cervical canal passes 1,5 t.f. (3,0 cm). Bag of waters is intact. What is labor management?

A. Amniotomy

B. Tocolytic therapy

**C. Labor management through natural maternal passages**

D. Cesarian section

E. Stimulation of labor activity

8. Gravida, 22 years old was admitted to urologic department with diagnosis: 33-th week of gestation, cephalic presentation, abscess of the right kidney with purulent fusion of renal parenchyma. Marked signs of bacterio-toxic shock. Nephrostomy performed earlier was not effective. Pregnant has to undergo nephroectomy. What condition of the kidney is an indication to nephrectomy?

A. Pyelonephritis with hypertension and azotemia

B. Primary acute gestation pyelonephritis

C. Secondary chronic recurrent pyelonephritis

D. Purulent-destructive pyelonephritis of the solitary kidney

**E. Abscess of the kidney**

9. Secundigravida, 25 years of age was admitted to gynecologic unit with diagnosis: 8 weeks of gestation, active phase of rheumatism, combined mitral defect with prevalence of mitral stenosis with unsufficient blood circulation II A stage. First gestation was interrupted due to the heart disease. During the last year – 4 rheumatic attacks, unstable compensation and insignificant effect despite treatment in the in-patient department. What is necessary to do for the prophylaxis of unfavorable course of pregnancy?

A. Target therapy of the basic disease with hospitalization on prophylactic bed at 12 weeks, 26-32 weeks and a week or two before labor

B. Treatment of blood circulation insufficiency, prolongation of pregnancy and cesarian section at 38 weeks of gestation

C. Treatment of blood circulation insufficiency,prolongation of pregnancy and labor at 36-37 weeks of gestation.

**D. Therapeutic abortion and treat the basic disease**

E. Treatment of insufficiency of blood circulation, prolongation of pregnancy, during labor – episiotomy, midwifery forceps

10. Gravida, 24 years old, term of gestation – 28 weeks, arterial pressure – 130/90 mm Hg. Edemas of the lower extremities are determined. In clinical blood analysis: protein – 0,66%, leucocytes – 20-25 in the field of vision, bacteriuria. From the past history: before pregnancy patient was treated for pyelonephritis several times. What complication of pregnancy may cause pyelonephritis?

**A. Preeclampsia**

B. True fused placenta

C. Amniotic fluid embolism

D. Uterine hypotonia

E. Anemia of pregnancy

11. Gravida, 36 weeks of gestation was ill with rubella in the first months of pregnancy. What anomaly of development may be in the fetus?

**A. Anomaly of eyes, heart**

B. Anomaly of kidney, urinary bladder

C. Anomaly of the liver, stomach

D. Brain, neural tube

E. Anomaly of the lungs

12. Gravida, 28 weeks of gestation 2 weeks after angina developed headache, pains in the loin, edemas,elevation of body temperature to 37,8\* C, insignificant breathlessness. Objectively: edemas of the lower extremities and face are determined, m0stly expressed in the morning, arterial pressure – 140/90 mm Hg., Pasternatsky’s symptom is positive on both sides; clinical blood analysis: leucocytes – 2-3 in the field of vision, erythrocytes – 10-15 in the field of vision, protein – 6,0 g/l, hyaline cylinders. What is the most probable diagnosis?

A. Urolithiasis

B. Pyelonephritis of pregnant

C. Mild preeclampsia

D. Hypertension

**E. Glomerulonephritis of pregnant**

13. Gravida, 22 years of age is at the maternity hospital with diagnosis: 36 weeks of gestation, diabetes mellitus, insulin-dependent type, complicated with neuroretinopathy. On next physical examination pregnant complained of worsening of vision, mist before eyes, headache. On ophthalmologic examination: eye fundus with past hemorrhages, degenerative changes, cords of connective tissue along the vessels of retina. What is the labor management in the given case?

A. Treatment of the basic disease before development of spontaneous labor activity

**B. Urgent cesarian section**

C. Preparation of maternal passages during 2-3 days, stimulation of labor activity with oxytocin

D. Amniotomy with subsequent intravenous drop by drop infusion of enzaprost and oxytocin

E. Planned cesarian section

14. Gravida, 30 weeks of gestation was admitted to the maternity hospital. Patient complains of stomachaches, abdominal distension, nausea, vomiting, breathlessness. Body temperature – 37,8\*C, pulse rate – 110 beats/min, arterial pressure – 120/80. Tongue is dry. On palpation of the abdomen: defensive tension of the abdominal muscles, not sharply expressed positive Blumberg’s guarding symptom in the right abdomen. Clinical blood analysis: Hb. – 130 g/l, leucocytes 14x109/l, ESR – 60mm/hour. Uterine is in normotonus. Fetal heart beat – 136 beats/min. What aid is necessary to be given first?

A. Cesarian section

B. Introduction of tocolytics

**C. Appendectomy**

D. Antibiotic therapy

E. Introduction of spasmolytics

15. Patient, 25 years old was hospitalized into gynecologic department, term of gestation – 11 weeks. Patient complains of pain in the lower abdomen. In past history: 3 weeks ago he had had rubella in a severe form. On bimanual examination: uterine cervix is formed, outer fauces is closed. Uterine body is enlarged to 11 weeks of gestation, of pastry consistency, painless. Region of uterine appendages is without peculiarities. What treatment tactics is the most expedient?

A. Minor cesarian section

B. Prolongation of pregnancy

**C. Artificial abortion**

D. Introduction of spasmmolytics

E. Introduction of uretotonics

16. In secundigravida 25 years of age with severe form of insulin-dependent diabetes mellitus at term of 32 weeks of gestation total premature normally located placenta separation began. During cesarian section surgery, local outpouching along left uterine rib was determined. Uterine is of marble appearance, cyanotic-purple color. In the abdominal cavity there 200 ml of hemorrhagic fluid. What complication developed after premature normally located placenta separation?

A. DIS-syndrome

**B. Couvelaire uterus (uteroplacental apoplexy)**

C. Hemorrhagic shock

D. Amniotic fluid embolism

E. Uterus hypotonia

17. Parturient is delivered to the maternity hospital by ambulance in the severe state. Active labor. Skin integuments and visible mucous membranes are cyanotic. Edemas of the lower extremities. On auscultation: presystolic murmur, flapping first heart sound on the apex, left and upper cardiac borders are changed. Cough developed. On vaginal examination: full opening of the uterus, fetal head is in the pelvic cavity, saggital suture is in the direct size of the outlet. Fetal heart sounds is rhythmic, to 142 beats/min. What is the plan of labor management?

A. Management of labor through natural maternal passages

B. Urgent cesarian section

C. To start complex infusion therapy

**D. To exclude II period of labor by forceps delivery. Treatment of insufficiency of blood circulation.**

E. To accelerate delivery by intravenous introduction of oxytocin

18. Primigravida, 30 years of age was referred to department of pathology of pregnant by the physician of prenatal care clinic, term of gestation – 34 weeks, increased arterial pressure up to 160/100 mm Hg. Patient states that arterial pressure was increased before onset of pregnancy, did not undergo treatment. On admission: general state is satisfactory, no edemas. Fundal height of the uterus over the pubic – 32 cm., fetal position is longitudinal, fetal head is movable above inlet into the small pelvis. Fetal heart sounds are rhythmic, 148 beats/min. On examination of kidneys state no deviations were revealed. On the eye fundus – arterial spasm and focal changes of the retina. On ultrasonic examination symmetric hypotrophy of the fetus is revealed. State the most probable diagnosis.

A. Preeclampsia of a moderate degree of severity.

B. Chronic glomerulonephritis.

**C. Hypertension.**

D. Vegetative-vascular dystonia by hypertonic type.

E. Syndrome of development delay of the fetus.

19. Primigravida, 20 years old. On examination at prenatal care clinic at the term of 20 weeks gestation clinical urine analysis revealed sugar (1,5 g/l in diuresis of 2,0 l.). Clinical blood analysis for an empty stomach revealed glucose – 5,3 mmol/l. 2 hours after glucose load (50 gr. Of glucose dissolved in 200 ml of water) in clinical blood analysis 6,2 mmol/l of glucose is determined. What is the initial diagnosis?

A. Diabetes mellitus of the pregnant.

B. Diabetes mellitus I type.

**C. Glycosuria of pregnant.**

D. Disorder of glucose tolerance.

E. Gestational diabetes mellitus.

20. Gravida, 36 years of age was referred by the physician of prenatal care clinic to the department of pathology of pregnancy because of vaginal bleeding at the gestation term of 26 weeks. First pregnancy, during 7 year period was treated for infertility. On examination: uterine cervical cancer1a was revealed. Define the most rational tactics of pregnancy management.

A. To prolong pregnancy to term labor.

B. To prolong pregnancy to the term of 28 weeks with preterm delivery through natural maternal passages.

C. Cesarian section in mature pregnancy with hysterectomy and upper third part of the vagina.

**D. To interrupt pregnancy with intra-amniotic introduction of gramicidin with subsequent treatment.**

E. To prolong pregnancy to fetal vitality, pre-term cesarian section delivery and radical extirpation of the uterus with appendages.

21. First delivery at term in parturient with mitral stenosis lasts 08.hours 08 min. Parturient is in sitting position in the bed, leaning against bed edges. Patient breathes with open mouth, face and upper part of the body is covered with sweat drops. At a distance rales are heard, from the mouth foamy, blood- tinged sputum is discharged. Pulse rate – 130-150 beats/min. What complication developed during delivery?

A. Paroxysmal tachycardia.

B. Bronchial asthma attack.

**C. Acute cardio-vascular insufficiency, lung edema.**

D. Cardiac fibrillation.

E. Chronic heart insufficiency.

22. Gravida, 27 years of age, term of gestation 30 weeks, was admitted to the department of pathology of pregnancy, complaining of weakness, headaches,, drowsiness, nausea, feeling of thirsty, polyuria. Patient has been ill with diabetes mellitus I type. On examination: uterus on palpation is in normotonus, fundal height of the uterus above the pubic is 33 cm, size of the largest vertical recessus is 12 cm. Fetal heart beat sounds are dull, rhythmic, 150 beats/min. Skin is dry, edemas of the legs and anterior abdomen. Arterial blood pressure – 160/100. Acetone odor from the mouth. Laboratory examination: clinical blood analysis – glucose 20 mmol/l, clinical urine analysis – sugar – 40g/l, urine acetone – 3+++. What complications developed in pregnant?

A. Hydraamnion, big fetus.

**B. Ketoacidosis, hydraamnion, preeclampsia of moderate degree of severity.**

C. Diabetic ketonemic coma, preeclampsia of moderate degree of severity.

D. Hypoglicemic hydraamnion.

E. Diabetic angiopathy, lactate-acidosis.

23. Gravida of 24 years of age, was admitted to the department of pathology of pregnant, complaining of general weakness, breathlessness, heart beats on physical loading, dizziness. Past history: 2 labors, this gestation is the 3-d one, term of gestation – 36 weeks. On physical examination: skin integuments are pale, arterial pressure – 100/60 mm Hg., pulse rate – 86 beats/min., rhythmic, slight systolic murmur is heard at the apex, liver and spleen are not determined. Laboratory examinations: Hb – 80 g/l, erythrocytes – 2,6x1012/l, reticulocytes – 5%, color index – 0,8, hematocrit (PCV) – 0,3, poikilocytosis, anisocytosis, serum iron – 9mkmol/l.

What is the most probable diagnosis?

A. Hemoglobinopathias.

B. Hemolytic anemia.

**C. Iron-deficiency anemia.**

D. Mitral valve insufficiency.

E. Vegetative-vascular dystonia, hypotonic type.

24. Gravida, 23 years of age complains of enlargement of the thyroid gland. Gestation term – 12 weeks. Objectively: pulse rate – 72 beats/min., arterial pressure – 110/70 mm Hg. Thyroid gland is enlarged at the expense of all portions, on palpation: painless, movable. What examinations should be made to assess function of the thyroid gland?

**A. Defining of TTH, T3 T4 levels, antibodies to thyreoperoxidase.**

B. Defining of TTH, T3 T4 levels.

C. Absorption of 1131 by thyroid gland.

D.Ultrasonic investigation of thyroid gland.

E. Scintigraphy of the thyroid gland.

25. Patient appealed for doctor’s advice to prenatal care clinic because of pregnancy, 4-5 weeks gestation. Gestation is desirable. In past history: rheumatism in the childhood, combined mitral defect of the heart with prevalence of mitral valve insufficiency. At what periods of gestation in-patient treatment is recommended?

A. 16 weeks, 34 weeks, 39-40 weeks.

B. 6-7 weeks, 16 weeks, 38 weeks.

C. 10-12 weeks, 24 weeks, 37-38 weeks.

**D. 8-12 weeks, 28-32 weeks, 37 weeks.**

E. 12-16 weeks, 27-28 weeks, 37-38 weeks.

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