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TACTICS FOR CARRYING PREGNANCY IN PREGNANT WOMEN WITH CONGENITAL HEART DEFECTS .

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Resume: congenital heart defects in pregnant women are a very common pathology in the practice of a cardiologist and obstetrician-gynecologist, and can cause complications at different stages of pregnancy.

Keywords: ventricular aro barrier defect ,Batalov parok, Fallo triad , Fallo tetradase , aortic coartation , aortic mouth stenosis , hypoxia , acrocyanosis ,preclamysia .

Congenital heart defects (CHDS) are defects in the structure of the heart and large vessels. The most common are ventricular septum defect (VSD) — 27-42%, atriums septum defect (ASD) — 5-15%, open arterial defect (OAP) — 10-18%, aortic coarctation — 7%, congenital aortic stenosis — 6%, pulmonary artery stenosis-8-10%, Fallot group defects [1]. Hemodynamic disorders and clinical manifestations vary depending on the size, location, nature of the defect, and duration of heart damage. The main complaints associated with heart defects in pregnant women are not specific: fatigue, muscle weakness, heaviness in the legs, drowsiness, palpitations and shortness of breath that occurs during exercise; as the defect progresses, shortness of breath is also observed at rest, swelling occurs and rhythm can be disturbed.

Diagnosis of heart defects .

There are indications that Anamnesis has a congenital heart defect and heart murmurs from childhood. Physical examination includes palpation of the heart region, cardiac percussion and vascular bundle, auscultation of heart tones. Laboratory studies are carried out at the pregravidary preparatory stage, during pregnancy (for 10-11, 26-28 and 32 weeks) and after childbirth, including to assess the condition of the blood clotting system. Instrumental studies .

* electrocardiography (ECG) is carried out as the main stage of examination, allows you to identify signs of hypertrophy (and overload) of different parts of the heart (depending on the type of malformation and characteristic hemodynamic disorders).

* Echocardiography (echocardiography) and dopplerecocar diography in most cases allow you to identify pathognomonic signs of malformation, objectively assess its level, severity of intra-cardiac hemodynamics disorders and functional state of various parts of the heart.

Tactics of managing pregnant women according to the latest recommendations of European and

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Russian heart societies, there are two risk groups among pregnant women with heart defects — high and low [2,12]. The high risk group includes patients with functional heart failure III—IV class, regardless of the cause of the disease. Most often, diseases that lead to the development of such heart failure include heart defects accompanied by pulmonary hypertension, in which maternal mortality reaches 30-50%. The high risk group also includes patients with aortic stenosis and severe levels of aortic valve. Pregnancy is not recommended in high-risk patients. In the case of pregnancy, its interruption is indicated, since the risk for the mother is high: the mortality rate is 8-35%, severe complications are 50%. Even termination of pregnancy itself has a high risk due to a decrease in myocardial contractility as a result of vasodilation and anesthesia.

Pregnant women without pulmonary hypertension, as well as mild to moderate valve insufficiency, are among the low risk group. Decompensation of cardiac activity during pregnancy with such heart defects does not occur due to a decrease in total peripheral vascular resistance. Patients with small or medium levels of aortic stenosis also tolerate pregnancy. In these cases, the pressure gradient increases at the same time as the shock volume increases. The average level of pulmonary stenosis is also well tolerated and requires intervention only from time to time during pregnancy. Most patients with heart defects without artificial valves can have a good pregnancy. However, residual defects after cardio intervention occur in 2-50% of cases and should be identified in clinical and echocardiography. Cardiac examination, even in low-risk cases, is carried out every trimester. All pregnant women with defects need constant monitoring of the cardiologist (therapist), obstetrician-gynecologist. They need to perform an Ecox once a month, three times during pregnancy they are admitted to a multidisciplinary hospital with cardiac and obstetric departments.

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* First hospitalization before 12 weeks of pregnancy. Clarifying the diagnosis, solving the issue of the functional state of the cardiovascular system, the activity of the Rheumatic process, maintaining pregnancy.

* The second hospitalization at 27-32 weeks is the period of greatest stress in the cardiovascular system. During this period, careful treatment of the patient, correction of therapy and treatment of placental insufficiency is carried out.

* Third hospitalization at 35-37 weeks (2-3 weeks before the expected birth), preparing women for childbirth, developing maternity tactics, therapy against heart and rheumatism. Additional hospitalization of women with acquired heart defects should be carried out in cases of complications of pregnancy (preeclampsia, placental insufficiency, risk of premature birth) and worsening of the underlying disease.

Non-drug treatment includes compliance with the mode of work and rest, diet (table 10 according to Pevzner) with table salt and fluid restriction, in case of violation of venous return —

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wearing elastic socks. Drug therapy is prescribed individually by a cardiologist.

The left ventricle is prescribed diuretics (50-100 mg hydrochlorothiazide per day, 40-60 mg furosemide per day) or nitrates with heart failure (shortness of breath, orthopnea, cough and other symptoms), which contributes to the accumulation of blood in the vessels of a large circle of blood circulation and a decrease in pre-load on the heart (isosorbid dinitrate), but under the influence of these drugs, With a decrease in systolic function of the left ventricle, cardiac glycosides can be used [3].

Diuretics and cardiac glycosides are also prescribed for right ventricular heart failure. It should be remembered that angiotensin receptor blockers and angiotensin-converting enzyme inhibitors are contraindicated in all periods of pregnancy, and the use of spironolactone is not indicated in the first trimester! In the left compartment, selective b-adrenoblocators are prescribed with sinus tachycardia, which contribute to an increase in pressure and stagnation of blood in a small circle of blood circulation (bisoprolol is 5-10 mg per day). If a taxisistolic form of atrial fibrillation occurs, cardiac glycosides are prescribed (digoxin at a dose of 0.25—0.375 mg per day), which allows you to control your heart rate in 60-70 V minutes. To prevent thromboembolic complications, drugs (non-fractional or low molecular weight heparins) that affect the rheological properties of the blood are indicated. Therapy is carried out by controlling blood clotting during pregnancy.

With the onset of Labor, the introduction of Heparin Sodium should be stopped, and if there is no bleeding, it should be continued 4-6 hours after childbirth. If the birth occurred indirectly against the background of taking anticoagulants (warfarin), then the effect of the latter is eliminated by pouring two doses (500 ml) of freshly frozen plasma. Treatment is restored 24 hours after birth with indirect anticoagulants. During this period, they are safe for the fetus because they do not enter Milk [4]. When cesarean section is planned within 7-10 days, patients who received indirect anticoagulants during the operation are transferred to low molecular weight heparins (nmg) and one of the antithrombocytes. Heparin is stopped 8 hours before the operation and restored after 3 days.

Against the background of drug therapy, dynamic monitoring and control of the CIS - colic function of the left ventricle and pressure (Echocg) in the pulmonary artery is carried out. To prevent a decrease in systolic function of the left ventricle, nifedipine is prescribed. If it is necessary to surgically correct heart defects, the tactics of managing patients are determined by the cardiologist.

Prevention of pregnancy complications with heart defects:

* diet with a sufficient amount of proteins, vitamins and trace elements;

* limiting the consumption of table salt and liquid;

* prevention of respiratory and urinary tract infections;

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* normalization of the mode of work and rest, restriction of physical activity;

* appointment of phytopreparations with sedative effects.

Ceasarean section in the following cases:

• combining malformation with obstetric complications (narrow pelvis, misalignment of the fetus in the uterus, placenta Previa);

* mitral valve insufficiency with significant circulatory disorders (pronounced regurgitation);

• surgically irreparable mitral stenosis;

* defects of the aortic valve with impaired blood circulation.

In all cases, the decision on the method of delivery must be made by cardio journals, Obstetricians and anesthesiologists together with the patient. It is preferable to set a delivery date so that the entire medical team is ready [5].

Ventricular septum defect

It is important to distinguish between low and high defects (JMP) of the ventricular aro barrier defects. Low VSD is located in the muscular part of the ventricular septum (Tolochinov — Roje's disease), the flow of blood from left to right is insignificant with such a defect, there are practically no hemodynamic disorders, this defect has a favorable course. Upper VSD is characterized by a significant outflow of blood from left to right, which first leads to overflow of the right ventricle, pulmonary artery system, then the left atrium and left ventricle. Volume overload is accompanied by an increase in the right and left parts of the heart.

In Tolochinov-Roje disease, pregnancy control tactics with a vaginal septal defect (low VSD) pregnancy and vaginal delivery are not contraindicated. Tactics with high VSD depend on the degree of pulmonary hypertension and the stage of heart failure. With small lung hypertension and level I heart failure, pregnancy is not contraindicated, childbirth is carried out through the natural birth canal. Pregnancy is contraindicated with moderate to high pulmonary hypertension, as well as in the presence of signs of circulatory failure corresponding to Level III-IV. If the pregnancy is prolonged almost throughout the entire pregnancy, it is recommended to stay in a multidisciplinary hospital, abdominal delivery is indicated (if not associated with lung hypertension).

The open arterial canal-open arterial canal (OAP, Botallov canal) is a vein connecting the aorta and pulmonary artery. Usually the disease is diagnosed and operated on in childhood. In the open arterial duct, blood from the aorta enters the pulmonary artery through an immature duct, leading to hypervolemia in pulmonary circulation with the gradual development of left cardiac hypertrophy. The course of malformation can be different: from an asymptomatic state to a clear clinical picture. With small defects, clinical symptoms can first appear during pregnancy.

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Carrying pregnancy in an open arterial protocol. In the uncomplicated parish of Batalov, pregnancy is not a contraindication , in the form of complications (in heart failure), pregnancy is a contraindication . Boorish tactics taking place on the barrier fault between compartments. Compartment aro barrier defect (DMPP), which accounts for about 5-15% of all congenital heart defects, is 2 times more common in women. There are 3 types of atrial septal defect: the primary (20%) is located at the base of the barrier and is often combined with VSD. The secondary (70%) is localized in the center of the barrier (in the area of the oval fossa), which is differentiated by an open oval window that closes shortly after birth. . The Sinus venous defect (10%) is located near the collapse of the upper vena cava. Hemodynamics in DMP is determined by the size of the defect, the volume and direction of blood flow, the status of blood vessels in the pulmonary circulation, and the age of patients. With a small defect, blood flow passes from left to right and does not affect hemodynamics in childhood, but by the age of 30-40, the discharge is bilateral, then from right to left, complaints about shortness of breath, rhythm disturbances, the development of heart failure appear [7].

The tactic of managing pregnant women with atrial septal defects with a large number of defects pregnancy is contraindicated due to high pulmonary hypertension, Cardiomegaly and early development of heart failure. In the early stages of pregnancy (up to 12 weeks), artificial abortion is carried out, followed by delivery in the abdomen. If the pregnancy is prolonged almost throughout the entire pregnancy, multidisciplinary hospitalization, drug therapy for heart failure is indicated. Delivery is carried out in the same place, in the presence of a cardiologist, through the vagina, if there is Hypertension of the upper lungs, it is possible to give birth by caesarean section. With small-sized DMPP, pregnancy and childbirth are not contraindicated.

Aortal valve congenital stenosis in most cases, congenital stenosis of the aortal Valve is differentiated between Valve-bearing, less common subclapan (muscular and membranous), and supraclapan aortal valve stenosis. Subclapan muscle stenosis is synonymous with hypertrophic cardiomyopathy.In valve stenosis, the commissures narrow, the valve caps thicken, the valve is dome-shaped, the aortic opening is small. Porok may not bother for a long time, but over time, hypertrophy of the left ventricle increases, then its expansion occurs. Due to the peculiarities of the hemodynamics of the gestational age, pregnancy can lead to decompensation of a heart defect. Symptoms of relative coronary insufficiency may occur in aortic stenosis due to the development and insufficient release of left ventricular hypertrophy (with the development of normal angina attacks and possibly myocardial infarction) [8].

Complications of congenital stenosis of the aortal valve:

* acute left ventricular failure ;

* chronic heart failure;

* fatal rhythm disturbances and conduction;

* acute coronary insufficiency;

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* brain complications, sudden death.

Tactics for managing pregnant women with congenital stenosis of the aortic mouth

Pregnancy with this defect is undesirable, and the issue of its occurrence and extension must be resolved separately. However, with mild to moderate stenosis of the mouth of the aorta, pregnancy, and childbirth can be taken satisfactorily. The risk of complications is much higher both during pregnancy and childbirth and in the postpartum period. In the case of pregnancy, the appearance of early stage brain symptoms (frequent syncope conditions), retrosternal pain, and shortness of breath are indications for termination of pregnancy. If the time of pregnancy is already long, a caesarean section is an indication.

Aortic coarctation

Aortic coarctation can occur anywhere, but is often observed in the area of the Isthmus, usually at the distal exit of the left clavicularis artery.When measuring blood pressure from the hands , its level comes out higher, than from the legs.. Obstruction of blood flow to systole results in increased overload and hypertrophy of the left ventricle, followed by its dilation and heart failure [9,10].

Possible complications of pregnancy with aortic coarctation:

* blood transfusion into the brain;

* detachment and rupture of the aorta

* infectious endocarditis;

* spontaneous termination of pregnancy;

* delayed fetal growth.

Tactics for managing pregnant women with aortic coarctation

After surgical correction of the defect, the issue of taking a pregnancy is positively resolved. Unclear aortic coarctation and blood pressure should not exceed 160/90 mm sim ust.pregnancy and vaginal delivery are possible (under the supervision of a cardiologist). If complications develop with Arterial hypertension and the risk of rupture of the altered aortic wall, the birth will end with cesarean section. During pregnancy, it is recommended to control ad with antihypertensive drugs (cardioselective B-blockers are prescribed: metoprolol, bisoprolol, betaxolol).

With constant high blood pressure, severe heart failure,impaired cerebral circulation, pregnancy is an absolute contraindication . It is recommended to limit physical activity during pregnancy, even up to multidisciplinary hospitalization with cardiac and obstetric departments for the entire period of pregnancy. The tactics of operated patients depend on the duration of the claim, the type of operation and its effectiveness. If high blood pressure is maintained, the duration of the

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operation is less than 1 year,it is recommended to complete childbirth with a caesarean section. In other cases, childbirth is carried out through the vagina.

Pulmonary artery stenosis

The valve and subclapan (fibrocusulose growth in the area of the right ventricle exit) distinguish stenosis. Parochus is often combined with the inter-divisional barrier defect (Fallo triad) [11, 13].

Due to the Prevention of blood flow, with valve stenosis, the pressure in the right ventricular cavity increases significantly, first its hypertrophy, then its expansion develops. Complications of pulmonary stenosis:

* right ventricular insufficiency;

* supraventricular extrasystola

Tactics for managing pregnant women with pulmonary stenosis when planning pregnancy the heart should be resolve before a defect occurs. At mild to moderate levels of pulmonary stenosis, pregnancy and childbirth usually occur safely (through the vagina). With the development of right ventricular insufficiency, it is necessary to do ceasarean section

Fallo group defect

Among the defects of the Fallo group, Fallo tetrad is of the greatest practical importance — a classic "blue" CHD consisting of ventricular aro barrier defect, infundibular stenosis of the pulmonary artery, aortic dextraposis and right ventricular hypertrophy. "blue" defects are a counter-indication for pregnancy and childbirth. Pregnancy sharply aggravates these defects [14].

Tactics for managing pregnant women with Fallo tetrad.

The risk of pregnancy in operated patients depends on the state of hemodynamics. The risk is low in patients with well-corrected defects. After palliative surgery — the creation of aortopulmonary anastomosis-the issue of pregnancy is solved separately. Radical operation-the elimination of the plastic of the septal defect of the ventricle and the obstruction of the exit part of the right ventricle is much more complicated, but more effective. Women who have undergone this operation can, in some cases, safely experience pregnancy and childbirth.

Conclusion.

The achievements of modern medicine and the timely surgical correction of congenital heart defects made it possible to significantly expand the indicators of pregnancy in patients who previously did not have the opportunity to know the joy of motherhood. In the absence of small defects and hemodynamic disturbances in pregnant women with acquired heart defects, pregnancy can be prolonged and delivered through the vagina. At the same time, patients should undergo a full examination and be monitored during pregnancy together with a cardiologist and obstetrician-gynecologist.

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