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HEART TROUBLE IS A SERIOUS THREAT TO CHILDREN'S LIFE

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Abstract: Congenital heart defects (CHD) are structural defects of the heart and (or) great vessels that are present in the patient from birth. Most defects disrupt blood flow within the heart or within the large and small blood circulation. Heart defects are the most common congenital defects and are the main cause of death in children due to developmental defects. Congenital heart defects are a significant problem in pediatrics due to the fact that they cause serious health problems and disability in children, their prevalence and the need for early surgical correction. Pathophysiologically, the main problem in CHD is the presence of pathological connections (shunts), narrowings or incorrect connections between the chambers of the heart and ventricles or in the system of great vessels. For example, blood flows from left to right or vice versa through interventricular or interventricular foramina, which reduces the degree of oxygen saturation of the blood and overloads the heart.

Keywords: Congenital heart defect, Interventricular, Interventricular, Blood flow

Introduction: Several factors play a role in the development of congenital heart defects. The most important are genetic and prenatal factors. Chromosomal abnormalities (for example, Down syndrome), hereditary mutations and family predisposition are the main internal causes. External factors affecting the mother's body during pregnancy are also of great importance: viral infections (especially rubella), alcohol consumption, smoking, uncontrolled intake of certain medications, severe metabolic diseases (for example, diabetes mellitus) and toxic substances have a negative effect on the development of the fetal heart. In most cases, the exact etiology is not identified, which indicates the multifactorial nature of the disease. The most studied causes of congenital heart defects are point genetic changes or chromosomal mutations in the form of deletions or duplications of DNA segments. Major chromosomal abnormalities, such as trisomies 21, 13, and 18, account for approximately 5-8% of cases of TYP. Trisomy 21 is the most common genetic cause. Certain genes are associated with specific defects. Mutations in the cardiac muscle protein, α-myosin heavy chain (MYH6), are associated with defects in the interstitial barrier.

Main part: There are many classifications of congenital malformations. Congenital heart defects are conditionally divided into 2 groups: White (arterial and venous blood do not mix, with left-right blood flow). Includes 4 groups: With enrichment of the small blood circulation

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(patent ductus arteriosus, septal defect, interventricular septal defect, AV-communicator, etc.); With weakening of the small blood circulation (isolated pulmonary stenosis, etc.); With weakening of the large blood circulation (isolated aortic stenosis, coarctation of the aorta, etc.); Without significant violations of systemic hemodynamics (heart dispositions - dextro-, sinistro-, mesocardia, cardiac dystopia - cervical, thoracic, abdominal). Blue (with right-left blood flow, arterial and venous blood mix). Includes 2 groups: With enrichment of the small circle of blood circulation (complete transposition of the great vessels, Eisenmenger complex, etc.). With weakening of the small circle of blood circulation (tetrad of Fallot, Ebstein anomaly, etc.). In 2000, the International Nomenclature was developed to create a general classification system for congenital malformations. Clinically, the symptoms of heart defects depend on the type and severity of the defect. In newborns, symptoms such as rapid breathing, fatigue during breastfeeding, failure to gain weight, bruising, sweating are observed. In older children, rapid fatigue, intolerance to physical activity, shortness of breath, heart murmurs (detected by auscultation), dizziness or fainting may occur. The early appearance of clinical signs usually indicates the severity of the defect. Modern instrumental methods play an important role in diagnosis. The most basic and informative method is echocardiography (heart ultrasound), which allows you to assess the structure of the heart, interchamber communications, the condition of the valves and blood flow in real time. In addition, an electrocardiogram (ECG) is used to determine the heart rhythm and electrical activity, and a chest x-ray to assess the size of the heart and the condition of the pulmonary vessels. Pulse oximetry helps to quickly determine the oxygen saturation of the blood. In more complex cases, cardiac MRI or catheterization methods are used. The treatment strategy is determined depending on the type, severity of the defect and the general condition of the patient. In mild cases, conservative treatment, that is, support of the heart with medications, is carried out. Diuretics reduce fluid load, ACE inhibitors and beta-blockers relieve the work of the heart, and antiarrhythmic drugs control rhythm disturbances. In moderate and severe defects, surgical intervention is required. This can be in the form of open heart surgery or minimally invasive procedures through a catheter. In some complex cases, heart transplantation is also considered. Thanks to the development of modern cardiac surgery, many congenital heart defects are successfully repaired. If the disease is not detected and treated in a timely manner, serious complications develop. These include chronic heart failure, growth and development failure, rhythm disturbances (arrhythmias), pulmonary hypertension, thromboembolic complications, infective endocarditis, and even death.

Conclusion: Especially severe cyanotic defects pose a direct threat to the lives of children. In conclusion, heart failure is a serious medical problem in children, and its early diagnosis, correct differential diagnosis and timely treatment significantly increase the patient's quality of life and life expectancy. Therefore, prevention during pregnancy, prenatal care and screening examinations after birth are important. With the capabilities of modern medicine, many children can live a full life even with this disease, but constant cardiological monitoring is necessary.

References:

1.The Lancet — Tug‘ma yurak kasalliklari bo‘yicha maqolalar
2.Journal of the American College of Cardiology — Pediatric cardiology tadqiqotlari
3.Circulation — Yurak-qon tomir kasalliklari bo‘yicha ilmiy maqolalar
4.Braunwald’s Heart Disease — A Textbook of Cardiovascular Medicine, 11-nashr, Elsevier
5.World Health Organization — Tug‘ma nuqsonlar va bolalar salomatligi bo‘yicha hisobotlar