

CHARACTERISTICS OF RHEUMATIC CARDITIS IN PRIMARY AND RECURRENT RHEUMATISM

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Abstract: In this article, special attention is paid to elucidating the factors causing primary and recurrent rheumatism, pathogenesis, specific clinical signs, important diagnostic factors in the diagnosis of the disease, and modern principles of treatment.

Key words: rheumatic carditis, primary rheumatism, recurrent rheumatic fever, B-hemolytic streptococcus, streptolysin, large criterion, small criterion, rheumatic valvulitis, electrocardiography, FKG, ExoKG, differential diagnosis (decompensated chronic tonsillitis, viral myocarditis, polyarthralgia, grief syndromes), treatment (bed rest, diet therapy, drug therapy).

Rheumatic carditis is the most common heart disease in people under the age of 25. Rheumatic carditis kills more than 288,348 people worldwide each year and affects more than 15 million, mostly children and adolescents with severe conditions in low- and middle-income countries. The main etiological factor of rheumatic carditis is type A hemolytic streptococcal bacteria. Metabolic products of streptococcus - streptolysin - O, streptolysin - S, streptokinase, hyaluronidase, deoxyribonuclease affect body tissues. Because this streptococcal antigen (M-protein) is similar to the protein in the joints synovial membrane, nervous system, cardiomyocyte sarcolemma, heart valves, skin and some other organs and tissues, the inflammatory process in these areas observed. Hereditary predisposition is also of great importance in rheumatism. The onset of the disease is common among children aged 7-



15, and most of them are girls. Poor living conditions, malnutrition and low level of medical care also play an important role in the development of the disease.

Classification of acute rheumatic fever:

- According to the phase of the disease:
- active phase (grade I, II, III
- inactive phase
- According to the clinical-anatomical characteristics of the disease:
- A) By the heart:
- Primary rheumatic carditis without heart defects
- Recurrent rheumocarditis with heart defects
- Without obvious heart changes, rheumatism
- Rheumatic myocardiosclerosis
- B) Damage to other organs and systems:
- Polyarthritis, serositis (pleurisy, peritonitis, abdominal syndrome)
- Chorea, encephalitis, cerebral vasculitis, neuropsychological changes
- Vasculitis, nephritis, hepatitis, pneumonia, skin lesions, iritis, iridocyclitis, thyroiditis
- C) Consequences of extracardiac damage and residual complications
- D) Rheumatic nodes
- According to the course of the disease:
- Sharp
- Subacute, elongated
- Constantly relapsing
- Hidden

Primary rheumatism - most authors believe that the diagnosis of rheumatism is correct when there are two main or one main and two additional criteria. The main diagnostic criteria include: carditis, polyarthritis, chorea, rheumatic nodules, annular rashes. Additional diagnostic criteria include fever, arthralgia, leukocytosis, increased erythrocyte sedimentation rate, R-Q prolongation on ECG. Clinical experience shows that in most cases even the main signs are of relative diagnostic value.

ECG changes in the diagnosis of myocarditis are as follows:

Violation of rhythm activity in the form of tachycardia and bradycardia, a-v dysfunction;



P-R prolongation

In FKG, the following are observed:

Lengthening of the tone amplitude at the apex of the heart;

An increase in the amplitude of tones III and IV;

Functional and organic noise.

In rheumocarditis, all three layers of the heart are affected. Inflammation of the pericardium is rare in rheumocarditis. It usually occurs with pleural damage (pleuropericarditis). Clinically, there is a severe pain in the heart area, a dry and prolonged cough, children take a forced position, that is, they sit forward. In dry fibrous pericarditis, a pericardial friction noise is heard over the whole area of the heart or over a part of it.

Symptoms of pericardial damage in rheumocarditis:

Loss or reduction of pulsation and pericardial friction noise in the area of the heart;

Rapid enlargement of the heart;

Convergence of absolute and relative limits of heart murmur;

On the X-ray, the shadow of the heart changes its configuration in the form of a trapezium.

Recurrent rheumatic fever - in 25-50% of patients with rheumatism, relapses occur after nasopharyngeal infections or as a result of paraallergic effects. The onset of rheumatism can be confirmed by signs of intoxication, temperature increase, and joint syndromes. Chorea and other syndromes may recur. After each new attack, extracardiac manifestations become less obvious, but they still indicate the activity of the process. Symptoms of rheumatic valvulitis:

Systolic murmur (mitral regurgitation) associated with an apically located hissing I tone;

Low-frequency mesodiastolic noise in the mitral area;

Weak protodiastolic murmur heard along the left side of the chest (aortic regurgitation);

In the absence of these signs, one should be careful in talking about the rheumatic cause of myocarditis.

Laboratory and instrumental diagnosis of rheumatism:

In the blood analysis, a complete shift of the leukocyte formula to the left is detected - neutrophilic leukocytosis, the sedimentation rate of erythrocytes increases.

A biochemical blood test reveals an increase in the amount of α 2-globulins (more than 10%) and globulins (more than 20%), fibrinogen, sialic acids, seromucoids, and an increase in CRO. Antistreptococcal antibody titers rise to 1:250 or more.

In the ECG, tachycardia, rhythm and conduction disturbances can be observed in sinus arrhythmia, pacemaker migration, extrasystole, atrioventricular blockade;



In FCG, the weakening of the first sound, the appearance of the third sound, and a systolic murmur above the apex of the heart are detected.

ExoKG can detect a decrease in the contractile function of the myocardium, mitral valve prolapse.

Treatment

- Treatment of the child with remedial gymnastics training providing a moving regime (functional rehabilitation);
- Use of medicinal therapy (pathogenetic treatment) antimicrobial (penicillin 600000 2 million ED per day is prescribed for 2 weeks and transferred to benzathine-benzylpenicillin); anti-inflammatory (anti-inflammatory, desensitizing, analgesic, antipyretic and mild anticoagulant are recommended) and immunodepressant drugs (6-methyluria, cyclophosphane).
- Sanitation of chronic infection foci. It is advisable to isolate patients with acute rheumatism in a hospital, because it is a carrier of streptococcus.

Prophylaxis - to prevent recurrence of rheumatism, bicillin-3 and bicillin-1, 5, which have a long-lasting effect, are used; benzathine-benzylpenicillin or extensillin 600,000 ED for children up to 27 kg, 1,200,000 ED for children weighing more than 27 kg 1 time in 3 weeks, during the year:

- Those who have had rheumatism without carditis 5 years or up to 18 years;
- Carditis without heart failure not less than 10 years or up to 25 years;
- For patients with heart failure or patients who underwent surgery for life.

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