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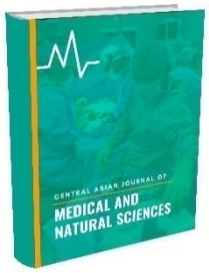

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Diagnostics of Acute Rheumatic Liquorad (Literature Review)

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Abstract: The issues of accurate and timely diagnosis of acute rheumatic fever are still topical in modern rheumatology. Clinical polymorphism, frequent vagueness of clinical and laboratory symptoms, absence of tests specific for acute rheumatic fever serve as a source of hypo- and hyperdiagnostics both in paediatric and therapeutic practice. acute rheumatic fever, risk factors, stages of course, classification, diagnostic criteria of the disease. The differential diagnostic criteria of rheumatic carditis, rheumatic polyarthritis, rheumatic chorea with other nosologies are described in detail.

Key words: acute rheumatic fever, rheumatic polyarthritis, differential diagnostic criteria.

Introduction. Acute rheumatic fever or rheumatism is an infectious and allergic systemic inflammatory disease of connective tissue with predominant involvement of the cardiovascular system, skin, and nervous system. It occurs in children under 15 years of age against the background of excessive immune response after infectious diseases.

The first episode of acute rheumatic fever (ARF) can occur at any age, but most commonly develops between 5 and 15 years of age, the age when sterptococcal pharyngitis is most common. ORL is uncommon before the age of 3 years and after the age of 21 years. However, prior pharyngitis with clinical manifestations is recognised in only about two-thirds of patients with ORL.

Worldwide, the incidence is 19/100,000 (5-51/100,000) with the lowest incidence (< 10/100,000) in North America and Western Europe and the highest (> 10/100,000) in Eastern Europe, the Middle East, Asia, Africa, Australia and New Zealand. The attack rate (the percentage of patients with untreated pharyngitis caused by group A streptococcus who developed acute rheumatoid fever) ranges from 1.0 to 3.0%. A higher attack rate is characteristic of certain M-protein serotypes of streptococci and when the host immune response is strong (probably as a result of an as yet uncharacterised genetic predisposition).

In patients with a previous episode of ORL, the recurrence rate of ORL in untreated pharyngitis caused by group A streptococcus approaches 50%, emphasising the importance of long-term antistreptococcal prophylaxis. The incidence has declined in most developed countries but remains high in less developed regions of the world, particularly in areas with Aboriginal or indigenous populations, such as Alaska Natives, Canadian Eskimos, American Indians, Australian Aborigines, and New Zealand Maori, where incidence is as high as 50 to 250/100 000. Meanwhile, the continued occurrence of

localised outbreaks of acute rheumatic fever in the USA suggest that large numbers of rheumatogenic strains of streptococci are still present in the USA.

The prevalence of chronic rheumatic heart disease is uncertain because criteria are not standardised and pathological examination is not performed in all cases, but it is estimated that there are ≥33 million patients with rheumatic heart disease worldwide, resulting in approximately 300 000 deaths annually.

Causes of rheumatismThe main cause of the disease is beta-haemolytic streptococcus group A. This bacterium has cross-reacting antigens that "knock down" the immune response and force the body to attack heart and kidney cells. Streptococcus secretes pathogenicity factors:

- adhesive factors;
- superantigens;
- M-protein;
- streptolysin-S;
- streptolysin-O;
- hyaluronidase;
- streptokinase.

Children with an aggravated family history (hereditary predisposition to the development of acute rheumatic fever) are at risk. The development of the disease also depends on the strain of streptococci (some of them are more pathogenic). Overcrowding, poor sanitary conditions, frequent colds and infections can sensitise the organism and lead to the development of acute rheumatic fever.

Clinic

Large and small criteria for acute rheumatic fever Kisel-Jones acute rheumatic fever are distinguished:

Major criteria:

1. Rheumocarditis (usually endomyocarditis).
2. Polyarthritis (large joints, migratory nature of inflammation, no deformity).
3. Minor chorea (seizures due to subcortical lesions).
4. Rheumatic nodules (subcutaneous induration).
5. Anular erythema (redness on the skin of the trunk and extremities).

Minor criteria:

6. Fever
7. Joint pain

Diagnosis

A paediatrician, internist, cardiologist or rheumatologist carefully studies the child's developmental history, collects a family history and prescribes laboratory instrumental tests.

- Analysis for antibodies to streptococcus.
- A swab from the pharynx for the presence of bacteria or their fragments.
- Inflammatory markers of the blood (C-reactive proteins, speed of COE).

- Electrocardiography (rhythm disturbances, changes in the amplitude of the teeth).
- Cardiac ultrasound (changes on the valves, fluid in the heart cavities, assessment of heart function).

Treatment and complications

The main direction of therapy is to get rid of streptococcal infection in a timely manner. For this purpose, antibiotics of the penicillin series are used. The course is from 10 to 14 days. After the main treatment, the patient is offered supportive therapy to exclude recurrences of the disease. Prophylaxis continues until the patient reaches 21 years of age or at least 5 consecutive years.

As symptomatic therapy, non-steroidal anti-inflammatory drugs are used. They reduce fever, remove joint manifestations and pain syndrome. If the desired effect does not occur - glucocorticosteroids are prescribed.

If small chorea prevails in the symptoms, then it is necessary to prescribe anticonvulsant therapy. It is controlled by a neurologist or psychiatrist.

Prevention

A distinction is made between primary, secondary and current prevention of acute rheumatic fever.

1. Primary. Timely treatment of sore throats, cavities, sinusitis, hardening of the child.
2. Secondary. Bicillin prophylaxis (Extencillin 2.4 million units every three weeks):

- At least 5 years.
- In case of manifestation of the disease in adolescence without formation of a heart defect - up to 18 years.
- Manifestation with heart defect - up to 25 years.

3. Current. Mandatory prescription of penicillins and NSAIDs in inflammatory diseases.

Conclusions: thus acute rheumatic fever is dangerous by formation of heart defects in case of late treatment. In conclusion, the following should be emphasised. The revised Jones criteria are relevant for regions with a high incidence of acute rheumatic fever. However, their application in Uzbekistan is problematic due to large interregional differences in the incidence of acute rheumatic fever

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