

FEATURES OF INFECTIOUS MONONUCLEOSIS IN CHILDREN

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Resume : *The highest incidence of mononucleosis is observed among children aged 3-9 years, but most often their disease occurs in mild forms, which are the most difficult to diagnose and often remain unrecognized. The article examines the modern literature on the etiology, clinical picture, laboratory diagnosis, and treatment of infectious mononucleosis. Based on the analysis of domestic and foreign literature, the issues of pathogenetic mechanisms associated with the formation of variants of the clinical course of infectious mononucleosis, laboratory diagnostic methods and, from the point of view of modern achievements in medicine, the principles of adequate etiopathogenetic therapy of patients are highlighted.*

Key words: *infection mononucleosis, diagnosis, treatment, children, atypical mononuclear cells.*

INTRODUCTION

Infectious mononucleosis is a viral infection characterized by damage to the lymph nodes, liver and spleen, sore throat and fever. The highest incidence of mononucleosis is observed among children aged 3-9 years, but most often their disease occurs in mild forms, which are the most difficult to diagnose and often remain unrecognized. In children of the first two years of life, the proportion of latent forms reaches 90%, in children from 2 to 10 years old it decreases to 30% -50%. 14% of children had indications of contact with patients with acute respiratory viral infections and sore throat, 6% of parents associated the disease with hypothermia. The main danger of this infection is that after the disease, the child's immune system disorders persist for a long time, and he becomes susceptible to a wide variety of microorganisms - bacteria, viruses, fungi, which can cause numerous infectious complications.

The manifestations of infectious mononucleosis may be similar to the usual acute respiratory infections. Therefore, mononucleosis often remains unrecognized, and parents begin to sound the alarm only when faced with the consequences of the disease. Children of the first year of life, as a rule, do not get sick: they are protected by antibodies received from their mother during the prenatal period of development (provided that the mother suffered this infection at the time). The causative agent of the disease causes the disease Epstein-Barr virus, which is a close "relative" of the herpes virus. The virus is widespread all over the world, and it can be detected in most of the adult population of the planet.

Like the herpes simplex virus, once it enters the body, the Epstein-Barr virus remains in it forever.

The incidence is noted all year round, its rises occur in spring and autumn. The virus is little resistant to external influences and quickly dies outside the human body. Its contagiousness is not very high, so infectious mononucleosis never occurs in the form of epidemics - only isolated (sporadic) cases or small local outbreaks are noted. The virus is transmitted by airborne droplets, but infection requires prolonged contact with the patient. Viral particles can also be detected in the saliva of a patient or a virus carrier, and the second way of transmitting the pathogen can be through contact: the disease is transmitted through toys or other objects on which infected saliva has fallen. After infection, the virus penetrates the mucous membrane of the upper respiratory tract, multiplies there, penetrates the tonsils and lymph nodes. It affects almost all lymph nodes, liver, and spleen. Instead of B lymphocytes infected and damaged by the virus, the body begins to produce new cells called "atypical mononuclears". They are absent in healthy people, and their name determined the modern name of the disease - "mononucleosis".

The first signs of the disease can be detected a week or two after infection. Sometimes the incubation period is longer (it can increase to 1-1.5 months).

The disease begins acutely, with a rapid rise in temperature to high numbers (38-39 ° C). The patient has enlarged all lymph nodes, especially the posterior cervical, occipital and submandibular. Their increase is noticeable to the eye, they are painless when pressed. Almost always, with infectious mononucleosis, the nasopharynx and tonsils are affected, Signs of adenoiditis are found in 78-95% of patients. Nasal congestion, difficulty in nasal breathing, and snoring are noted, especially during sleep. The patient's face acquires an "adenoid" appearance: puffiness, pasty eyelids, bridge of the nose, breathing through an open mouth, dry lips. Their appearance is usually accompanied by an even greater (up to 39-39.5 ° C) increase in temperature and deterioration of well-being. All patients have an enlarged liver and spleen.

Hepatomegaly can be detected from the first days of the disease, but it is more often detected in the second week. 15-20% of patients develop hepatitis as a complication. Sometimes jaundice appears. But there are no severe hepatitis cases with infectious mononucleosis. Liver enlargement can persist for a long time, its size usually normalizes only after 1-2 months from the onset of the disease. Splenomegaly refers to the late symptoms, it occurs in most patients. Normalization of the size of the spleen occurs within 1-3 weeks. Exanthema with mononucleosis appears in 18-25% of patients on the 3rd-14th days of the disease, has a polymorphic character — spotted, papular, spotty-papular, small-point, hemorrhagic. There is no definite localization. The rash persists for 4-10 days, sometimes leaving pigmentation. Rashes appear more often in children treated with ampicillin or amoxicillin (90-100%)

The course of infectious mononucleosis usually ends in 2-4 weeks, but sometimes it can take up to a month and a half.

B lymphocytes, which are affected by the Epstein-Barr virus, are one of the main cells of the immune system. Therefore, the disease is accompanied by a weakening of the immune system and an increased susceptibility of the child to other infections. These infections are no longer caused by viruses, but, as a rule, by bacteria and are regarded as complications of infectious mononucleosis. For example, every tenth child after angina caused by the virus itself suffers another sore throat caused by streptococcus. Purulent otitis media (inflammation of the middle ear), bronchitis and pneumonia are also possible.

The symptoms of infectious mononucleosis are quite characteristic - enlarged lymph nodes, sore throat, enlarged liver and spleen, fever. But not always each of these signs is sufficiently pronounced, so only a doctor can correctly diagnose it.

Diagnosis of infectious mononucleosis is performed by collecting anamnesis, clinical examination, laboratory and special examination methods and is aimed at determining the nosology and clinical form, severity of the condition, identifying complications and indications for treatment, as well as identifying factors in the anamnesis that prevent the immediate initiation of treatment or require correction of treatment depending on concomitant diseases.

Laboratory examination is mandatory: In the clinical blood test, changes in leukocytosis ($10-30 \times 10^9 / l$), neutropenia with a rod-shaped shift to the left, an increase in the number of lymphocytes, monocytes, an increase in ESR to 20-30 mm / hour are characteristic. At the end of the first week from the onset of the disease, in 50-80% of cases, atypical mononuclears appear in the peripheral blood of patients. The greater the number of them, the more severe the disease is. In addition, modern laboratory methods make it possible to detect the virus itself in the blood (more precisely, its genetic material), for this purpose, PCR polymerase chain reaction is widely used.

All patients with infectious mononucleosis are examined for HIV infection (the fact is that its early stages can also be accompanied by mononucleosis-like symptoms). A doctor's consultation is also necessary in order to exclude other formidable diseases - malignant blood diseases and diphtheria.

Bed rest is very important in the acute period of the disease, on average from 1 to 3 weeks, there is a possibility of injury to the enlarged spleen and even its ruptures. For the same reason, children are limited to physical activity for six months after the disease.

To reduce the temperature in infectious mononucleosis, paracetamol or drugs based on it are used. Aspirin is categorically not recommended, since its use, especially in this disease, can provoke the development of Ray's syndrome of severe liver and brain damage.

To facilitate nasal breathing, vasoconstrictor drops are prescribed in the nose, for the prevention of bacterial sore throat and pharyngitis - rinsing the throat and pharynx with antiseptic solutions with furacillin solution, tinctures of calendula, chamomile or sage. To reduce intoxication, it is necessary to drink plenty of warm water.

In some cases (severe course of the disease, significant enlargement of the spleen and lymph nodes), corticosteroid hormones have to be prescribed, which have an anti-inflammatory effect.

No matter how difficult the disease is, it ends with recovery. But disorders in the immune system can persist for quite a long time (up to 6 months). During this time, the child has an increased susceptibility to various infections, so it is necessary to limit his contacts with other people.

The body recovers from the disease for a long time: the child gets tired quickly, gets cranky, complains of poor appetite for several months after recovery. At this time, it is undesirable to plan long-distance trips, including "for recovery", if necessary, scheduled vaccinations are postponed to a later date.

The transferred disease leaves behind a stable immunity: despite the fact that the virus remains in the body forever, there are practically no relapses of infectious mononucleosis. Repeated infections are all the more impossible. The Epstein-Barr virus has oncogenic activity and can cause oncological diseases of the blood, therefore, children whose normal blood cell composition does not recover for a long time after clinical recovery are necessarily referred for consultation to a hematologist, with whom they may subsequently be on dispensary registration for a long time.

Conclusion: The prevention of infectious mononucleosis is reduced to limiting contact with patients. Since the virus is highly contagious, when a case of the disease appears in an organized children's collective, in a nursery, kindergarten, no quarantine measures are carried out-ordinary wet cleaning is enough. There is no specific prevention of infectious mononucleosis to date. Prevention. Antiepidemic measures are not carried out in the outbreak of infection. Patients are isolated for the acute period of the disease.

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