EXUDATIVE ERYTHEMA MULTIFORME ASSOCIATED WITH THE HERPES SIMPLEX VIRUS IN CHILDREN AGED 9-11 YEARS: CLINIC, DIAGNOSIS, TREATMENT

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Summary. Introduction. About 80% of cases of exudative erythema multiforme (EEM) are caused by the herpes simplex virus and its associations [1,2]. The direct connection of the herpes simplex virus, both with the debut of EEM and with subsequent relapses of the disease, was studied. However, the herpes simplex virus is not always the main factor, but is only a trigger in the development of this pathological process [1, 2, 3].

Exudative erythema multiforme associated with the herpes simplex virus occurs more often in adolescents and adults and is combined with orofacial (nasal and labial) localization [4,5].

Key words: exudative erythema multiforme (EEM), children, herpes simplex virus, the scheme of complex treatment.

The aim of the study.
To investigate the clinical manifestations of exudative erythema multiforme associated with the herpes simplex virus in children and to develop a scheme of complex treatment of this disease taking into account the features of the clinical course of the disease.
Object and research methods.

A clinical and laboratory examination of three children aged 9-11 years with a diagnosis of exudative erythema multiforme associated with the herpes simplex virus was carried out. During the clinical dental examination of the mucous membrane of the oral cavity, we evaluated its color, localization, number, dynamics of lesion elements, as well as the involvement of other anatomical areas in the process, analyzed the signs and nature of general intoxication (temperature reaction, presence and duration of regional lymphadenitis), the frequency of disease recurrences, the presence of accompanying and transmitted diseases. In addition, laboratory methods of research were carried out: clinical blood tests, immunological blood tests for the determination of IgE class antibodies; immunoenzymatic blood tests for specific IgM, IgG to the herpes simplex virus with determination of the avidity index; PCR study of oral fluid for herpes simplex virus.

Research results.

To the Dental Center of the Bogomolets National Medical University. The parents of children aged 9-11 years old turned to the Dental Center with complaints of an increase in body temperature up to 38.5°C, pain in the throat, in the oral cavity, inability to eat, and the appearance of blisters and blisters on the skin near the mouth, on the mucous membrane of the cheeks, lips, and tongue.

Medical history: the child has EEM for two weeks. The disease began with an increase in body temperature to 37.8°C. Against the background of increased body temperature, weakness and headache appeared. This condition was observed for two days. On the third day of the disease, rashes appeared in the oral cavity and the body temperature rose to 38.8°C. Treatment in the first three days of the disease was carried out at home according to the family doctor's recommendations with Nurofen (syrup) and oral rinse with Stomatofit and Betadine ointment. According to the child's mother, after using Betadin, the boy developed significant swelling and reddening of the red border of the lips, and the pain in the oral cavity increased. Also, the anamnesis of the disease revealed that the child had manifestations in the oral cavity not for the first time. The first episode of rashes occurred at the age of 3. The periodicity of rashes from the age of 7 was two to three times a year and mainly on the red border of the lips. Violation of the general condition was not observed. The presence of an active herpetic infection was confirmed by the laboratory method of examining oral fluid using the polymerase chain reaction method.

From the anamnesis of life it was found out that one patient (11 years old) was diagnosed with an allergic reaction to dairy products in the form of rashes on the skin of the face and hands at the age of 4.

Transferred diseases: acute respiratory 2-3 times a year. The first episodes of herpes infection in two children were observed at the age of 1.5-2 years and one child at the age of 4. The number of relapses of the disease is more than 4 times a year. No history of oral antibacterial agents was found in the patients.

During the clinical dental examination of the patients, grouped blisters covered with hemorrhagic crusts on the border of the red border of the lips were found. Single blisters are also detected on the skin near the mouth area on the right. Bleeding cracks in the corners of the mouth. Other visible areas of the skin are unchanged. The red border of the lips is significantly swollen, shiny, covered with...
massive crusts, and bleeds heavily when touched. The mucous membrane of the cheeks and lips is swollen, pasty, moderately hyperemic; bleeding erosions that merge and are covered with a dense fibrinous coating, as well as blisters, are determined. Sharply painful during palpation. On the back, lateral surfaces of the tongue, drainage erosions of various sizes, covered with a small amount of fibrinous plaque, are slightly painful on palpation. Submandibular and cervical lymph nodes are enlarged, weakly mobile, sharply painful during palpation. Nasal breathing of two patients was slightly impaired due to edema. Conjunctiva of children’s eyes without pathological changes.

We have analyzed the results of laboratory studies. So, an increase in ESR from 13 to 16 mm was determined in the hemogram, which may serve as an indirect sign of a pathological inflammatory process; an increase in the number of eosinophils up to 18.0% (with reference values of 0.5-5.5%), which indicates a possible allergic nature of the disease. The allergic nature of the disease was confirmed by the presence of high IgE values, which were 180-182 IU/ml (with reference values <60). Examination of the oral fluid by the PCR method showed the absence of herpes simplex virus DNA fragments in the oral fluid. In our opinion, this is related to long-term local symptomatic treatment of the mucous membrane of the oral cavity. Specific IgM in blood serum was not determined, but high-avidity IgG (63%) was detected, which indicates the activation of recurrent herpes infection.

So, on the basis of the anamnesis data, the nature of the clinical picture of the disease, the data of laboratory studies, the diagnosis was confirmed: exudative erythema multiforme associated with the herpes simplex virus.

Taking into account the peculiarities of the clinical manifestations of the disease and the results of laboratory studies, we have developed a scheme for local treatment of this disease.

**Scheme of complex local treatment of exudative erythema multiforme associated with herpes simplex virus.**

1. Application anesthesia of the red border of the lips and oral mucosa.
2. Professional oral hygiene, which consisted in removing soft dental plaque with a cotton swab dipped in an antiseptic solution (3% hydrogen peroxide solution or 0.05% chlorhexidine).
3. Antibacterial treatment of the oral cavity: (aerosol irrigation and applications on the affected elements with an ectericide solution; at home, oral baths with decoctions of medicinal plants (chamomile and sage flowers) 3-4 times a day were recommended.
4. Used as an anti-inflammatory agent Hydrocortisone ointment (1%). Applications were made to the lesions of the red border of the lips 2 times a day, during the first three days of the disease.
5. Taking into account the nature of the clinical manifestations of the disease (the presence of erosions, edema, hyperemia), we included the antihomotoxic drug mucosa compositum in the treatment scheme and used it as an additional therapy.
6. In the scheme of complex local therapy, we included physiotherapy treatment with the use of low-intensity helium-neon laser radiation. The treatment was recommended to be carried out once a day for 5 days.

Parents were trained on the antiseptic treatment of the red border of the lips and the mucous membrane of the oral cavity at home with recommended medicinal
products. Recommendations for parents regarding individual oral hygiene for the period of treatment of the disease have been provided. When improving the condition of the mucous membrane of the oral cavity for individual oral hygiene, we recommended toothbrushes with soft bristles and therapeutic and preventive toothpastes with fluoride and anti-inflammatory components of plant origin.

Conclusions

Exudative erythema multiforme was diagnosed in three children aged 9-11 years, which developed against the background of activation of the herpetic process in the oral cavity and perioral area, which was confirmed by clinical and laboratory research data.

The scheme of complex treatment of exudative erythema multiforme associated with the herpes simplex virus with the use of a helium-neon laser, which we proposed, contributed to a significant reduction of the clinical manifestation of the disease, namely: a significant reduction of the painful red border of the lips on the third day of treatment, acceleration of epithelization processes - on the fifth day of treatment.

When establishing the diagnosis of EEM, it is necessary to take into account the allergic history, previously prescribed drugs, as well as conduct diagnostic tests for herpes virus infection in order to prescribe rational therapy.

References: