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EXPERIMENTAL STUDY OF CHILDREN WITH OTOMYCOSIS.

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Abstract: Analyzing the results of preventive examinations and referring to the ENT doctor to solve research problems, forming further observation groups. The study was conducted in an observation group including 120 people. To study the prevalence and clinical characteristics of otomycosis, children with otomycosis were selected from the examined contingent. The work included children with different localization of mycotic process: otitis externa, otitis media, postoperative middle ear cavities. Depending on the method of treatment, the patient children were further divided into two groups.

Keywords: Otomycosis, microbiocenosis, young child, research groups, microbiological examination.

To solve this problem, we chose the method of photodynamic therapy using different photosensitizers (ra-dachlorin, photosens, methylene blue, diamond blue and diamond green). Aqueous solutions were used in concentrations from 1 to 100 mmol/L.

To evaluate the effect of photodynamic effects on yeast-like fungi of the genus Candida, their suspension at a concentration of up to 2.0 μmol/l was used. After incubation with chlorine photosensitizer (FS) for 15 min, the cell suspension was irradiated for 30 s with an EKOMP light source with a KS-11 light filter (wavelength 620-630 nm). Inactivation was evaluated based on photosensitizer and colony forming ability of fungi exposed to radiation. It was carried out through processed species of fungi and only species exposed to radiation. A total of 4 series of experiments were conducted with chlorine photosensitizer. The comparison group included 4 series of experiments using aniline dyes instead of chlorine photosensitizer: methylene blue, diamond blue and diamond green. In addition, 5 similar series of experiments were conducted, but instead of the EKOMP light source with a KS-11 light filter (wavelength 620-630 nm), 2 laser radiation sources were used - the Mustang-2000 laser apparatus for physiotherapy.

A suspension of spores of A. fumigatus and A. niger was used to evaluate the effect of photodynamic exposure on molds of the genus Aspergillus. The following were evaluated: 1. The ability of spores to germinate and form colonies after incubation for 15, 30 and 45 minutes with different concentrations of photosensitizer and irradiation light filter (wavelength 620) with EKOMP light source with KS-11 for 5, 10, 15 minutes -630 nm); 2. Viability of cultures before and after sporulation after incubation with photosensitizer at different concentrations for 30 minutes, 5 and 12 hours and irradiation for 5, 10, 15 minutes with an EKOMP light source with a KS-11 light filter (wavelength 620-630nm). A total of 16 series of experiments were performed with two repetitions.

Criteria for the inclusion of children with otomycosis in the study.

Analyzing the results of preventive examinations and referring to the ENT doctor to solve research problems, forming further observation groups. The study was conducted in an observation group including 120 people. To study the prevalence and clinical characteristics of otomycosis, children with otomycosis were selected from the examined contingent. The work included children with different localization of mycotic process: otitis externa, otitis media, postoperative middle ear cavities. Depending on the method of treatment, the patient children were further divided into two groups. In the comparative assessment of microflora of the upper respiratory tract and external ear, two groups were

observed: a group of healthy people with an observation group.

The groups were randomized by random sampling:

Group 2 - the main group of children with otomycosis. Treatment was carried out with the complex use of ozone therapy.

Group 2 is a comparison group of children with otomycosis. Treatment was carried out with the help of nitrofungin in the form of an alcohol solution.

Group 3 is a group of children without ENT diseases. Microbiological examination of the larynx was determined by taking swabs from the nose (separately from the right and left halves), throat and ear (separately from the right and left).

Information about the initial condition of the examined children, the results of treatment, was obtained during outpatient visits and preventive examinations. During the treatment period, monitoring was carried out with the appointment of control examinations.

The clinical effectiveness of the treatment was evaluated as follows:

- recovery (complete disappearance of clinical signs of otomy).
- improvement (a significant decrease in the severity of clinical symptoms of otomycosis)
- lack of effect (lack of positive dynamics, development of the main symptoms of otomycosis and (or) development of complications)
- uncertain outcome (early discontinuation from the study for reasons unrelated to ongoing treatment).

Assessment of side effects and tolerability of the prescribed drugs was carried out during the entire period of treatment:

- good (when there are no adverse events during therapy with the prescribed drug and when monitoring the patient);
- satisfactory (with mild unwanted side effects that do not require stopping treatment);
- bad (moderate or severe adverse events requiring discontinuation of treatment, additional examination methods and the appointment of corrective therapy);
- cannot be assessed (it is not possible to assess the tolerability of the therapy study scheme).

During the study, patient children were given information about the treatment, which explained all the details of the treatment.

Group 1 (main) children were prescribed complex ozone therapy. In order to exclude the subjectivity of the assessment of the effect of one drug, the treatment of otomycosis was carried out with three antifungal drugs in different patient children, the patient children were randomized by random selection.

Ozone therapy is given to sick children in the external auditory canal after the auricle. The procedure was carried out 1 time a day. Treatment was carried out until the disappearance of clinical manifestations of the disease.

In group 2 (comparison), the drug nitrofungin was prescribed in the form of an alcoholic solution. Nitrofungin solution was prescribed in the form of drops in the ear canal 3 times a day. The course of treatment continued until the clinical manifestations of the disease disappeared. To prevent relapse, the drug was continued to be used 1-2 times a week for 4-6 weeks.

All patient children underwent a general clinical examination: clarification of complaints, collection of anamnesis of illness and life, general blood list, general urinalysis. When collecting anamnesis, previous general somatic diseases and ENT diseases, information on previous traditional treatment for otomycosis, presence of symptomatic therapy and presence of factors predisposing to otomycosis were determined. The following otorhinolaryngological examination was performed: external examination of ENT organs, rhinoscopy, pharyngo-laryngoscopy, otoscopy, magnification technique (Ziegle funnel,

otoscope, operating microscope). The importance of automicroscopy with the help of an operating microscope as a quick diagnostic method that allows you to see the elements of the fungus deserves special attention. Hearing study includes the examination of the perception of whispered and spoken speech, if necessary, tone threshold audiometry is prescribed.

The diagnosis of children suffering from otomycosis is established based on the complaints of children, clinical appearance, otoscopy data (standard and magnification techniques), microbiological examination results. The condition of the external ear is determined by showing the skin of the ear canal, the presence and nature of discharge in the ear canal, the condition of the membrane (color, mobility, condition, increased identification marks, presence of perforation).

For microbiological analysis in sick children, it was cultured in a nutrient medium to obtain from the pathological discharge medium. The discharge from their ear was collected with a sterile swab and placed in a sterile sealed tube. An Amies medium (HiMedia Laboratories Pvt.Ltd., India) system with activated carbon in a polystyrene tube was used for material collection and delivery. The delivery time of the material to the laboratory did not exceed 2 hours. In the microbiological examination of ENT organs, cultivation was carried out directly in the selected medium: yellow-salt agar Chistovich G.N., blood agar, Saburo medium. Materials were taken with sterile cotton swabs, mediawere prepared according to standard recipes.Determining the sensitivity of bacteria to antibiotics by disk diffusion method: the culture of the bacteria under study is cultivated with Givental-Vedmina agar medium in a Petri dish. Paper discs containing certain doses of different antibiotics are placed on the inoculated surface with tweezers at the same distance from each other. The cultures are incubated at 35°C until the next day. The diameter of the growth zones of the studied bacterial environment is used to evaluate its sensitivity to antibiotics.

Susceptibility to antibiotics was determined - erythromycin and gentamicin. According to the information of the Ministry of Health of Bukhara region, when analyzing the results of bacteriological studies of children suffering from inflammatory diseases of the ear, the microbiological appearance of inflammatory diseases of the ear was determined. It was conducted in acute and chronic inflammatory diseases of the ear (acute and chronic otitis externa, otomycosis, otitis media). 25 different types of microorganisms have been identified.

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