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FOR THE TREATMENT OF PATIENTS WITH ATROPHIC NAZOPHARINGITIS, THE USE OF POLYMER-BASED OINTMENTS

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Abstract:

This article discusses the treatment of atrophic nazopharyngitis. The study involved 43 patients aged from 8 to 72 years, and upon admission a general clinical examination, radiography of the paranasal sinuses and a study of excretory function were performed. Introduction and the base of medicinal preparations such as riboflavin and glucose, along with this, it is ground in a dry form in a mortar, then the rest of the base is gradually added with part of the prepared base, mixed and heated in a water bath until riboflavin is dissolved and a uniformly colored mass is obtained. Thus, clinical observations indicate significant advantages of the polymer base used for the preparation of medicinal ointments that are used for atrophic nazopharyngitis

Keywords: atrophic nasopharyngitis, carboxymethylcellulose, ribovlavin

INTRODUCTION. In clinical practice, for atrophic nasopharyngitis, characterized by thinning and dryness of the mucous membrane of the nasal cavity and pharynx, and the formation of crusts on the surface, ointments with various medicinal substances are widely used. They, as a rule, have a complex composition, but despite this, in otorhinolaryngology, fatty and hydrocarbon bases are used, of which the most widely used is Vaseline, a mixture of liquid and solid hydrocarbons, these bases are inconvenient because they mix with water and are absorbed by the mucous membrane , medicinal substances from them enter the tissues slowly and in small quantities. In recent years, ointments based on polymers have been created. Our attention was drawn to the sodium salt of carboxymethylcellulose-sodium-CMC, which is approved for clinical use, has physiological inertness, lacks irritating properties, is well applied to healthy and pathologically altered mucous membranes, and is compatible with a number of medicinal substances. Thanks to its hydrophilicity, a homogeneous solution is formed with the secretion of the mucous membrane and exudate during inflammation, which contributes to the maximum release of the drug mixed with it and the rapid onset of the therapeutic effect. Using different concentrations of sodium salt of CMC, you can prepare ointments of any consistency.

THE PURPOSE OF THE STUDY was the use of polymer-based ointments for patients with chronic atrophic nasopharyngitis.

MATERIALS AND METHODS OF RESEARCH. For the treatment of 43 patients with atrophic nasopharyngitis at the Department of Otorhinolaryngology of the regional multidisciplinary medical center, we were the first to use ointments from various medicinal substances based on the sodium salt of carboxymethylcellulose. The age of the treated patients (24 women and 19 men) ranged from 8 to 72 years; upon admission, all of them underwent a general clinical examination, radiography of the paranasal sinuses and a study of excretory function.

In all patients, upon admission and during treatment, the transport function of the ciliated epithelium of the nasal cavity was studied using a full solution of methylene blue and the potential of the mucous membrane using silver chloride electrodes using the compensation method, and its temperature was measured with a modified electric thermometer TPEM-thermistor KMT-14, having a point sensor . We initially studied the possibility of using sodium-CMC as a basis for ointments with substances intended for the treatment of patients with atrophic nasopharyngitis.

RESEARCH RESULTS. For this purpose, 8 patients were given a gauze swab containing 3% sodium-CMC gel in one half of the nose, and a swab soaked in olive oil was inserted into the other half of the nose as a control. 1-1.5 hours after removing the tampon with a polymer base, softening and cleansing of the crusts was noted in this half of the nose, which confirms the hydrophilic properties of the polymer. Most of the crusts were removed along with the swab. The mucous membrane of both the nasal cavity and the pharynx became more juicy and moisturized, the temperature did not increase by 0.4 - 0.5 °C, the transport function of the ciliated epithelium of the nasal cavity improved,

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a decrease in potential was noted by 5 - 8 mV. In the other half of the nose, after removing the tampon with petroleum jelly, the surface of the crusts adjacent to the tampon became softer, but they still adhered quite tightly to the surface of the mucous membrane and were difficult to remove.

As a result of the research, significant advantages of the polymer base over the hydrocarbon base were noted. For the treatment of patients with atrophic nasopharyngitis, we used ointments of the following composition: riboflavin - 0.1 g, glucose 3 g, sodium-CMC - 2.9 g, distilled water - 94 ml; 2) 1% solution of sodium adenosine triphosphorus - 50 ml, sodium-CMC - 3 g, distilled water - 47 ml; 3) 1% solution of humisol 97 ml, sodium-CMC. But the dosage of the main active ingredients of these ointments corresponds to the recommendations of B.L. Frantsuzov for the use of local treatment of these drugs, which is due to their pharmacological properties, which favorably affect the function of the nasal mucosa. The introduction of an ointment containing adenosine triphosphoric acid (ATP) aims to provide the cells of the ciliated epithelium with the energy material necessary for their transport function. It is known that the basis of the wave-like movement of cilia is the interaction of adenosine triphosphoric acid with contractile proteins similar to actomyosin of muscle fibers (Bishop, 2014) humizol, a preparation of sea healing mud, is a biogenic stimulant containing biologically active substances that promote regeneration processes.

Riboflavin regulates redox processes, improves trophism and tissue regeneration; Glucose is a source of valuable nutritional material easily absorbed by the body. the technology for preparing the ointment according to the 1st and 2nd prescriptions provides for the following: first, the base is prepared, and then medicinal substances are introduced into it; preparation of the base: 2.9 sodium-CMC for the first ointment 6 g - for the second, fill with half the amount of distilled water, heated up to 50 °C, and leave to swell for 30-40 minutes, then add the rest of the water and stir until the polymer is completely dissolved. Introduction and use of such medicinal preparations as a basis: riboflavin and glucose are crushed in a dry form in a mortar, then the rest of the base is gradually added with part of the prepared base, mixed and heated in a water bath until riboflavin is dissolved and a uniformly colored mass is obtained. The ATP solution is added to the prepared base and mixed. Ointment with humisol is prepared as follows: 3 g of sodium-CMC is placed in a glass beaker and poured with 97 ml of a 1% aqueous solution of humisol, stirred and left for 5 hours after the specified time. The contents of the glass are mixed until a homogeneous mass is formed, using the method of using polymer-based ointments for atrophic nasopharyngitis. A gauze swab about 2 cm wide, 10 - 15 cm long is evenly lubricated with ointment with riboflavin and glucose and inserted into the nasal cavity for 1 - 1.5 hours, then the tampon is removed along with mucus and softened crusts, through the nasal cavity for 1 -1 .5 hours, a tampon soaked in ointment with humisol is inserted; in patients, the procedures were performed by combining the use of ointments with ATP humisol. The duration of treatment was 10-15 days; no other methods of therapy were used. In all patients, by the end of the course of treatment, the mucous membrane became more moist, its excretory function increased by 0.3-0.5 seconds compared to the initial one, the potential decreased by 5-8 mV, and the transport function of the ciliated epithelium of the nasal cavity improved. We examined 38 patients within 3 to 6 months after treatment. All of them noted a significant subjective improvement: no crusts accumulated in the nasal cavity, free nasal breathing was preserved. Compared with the initial data, less dryness of the mucous membrane and no accumulation of crusts in the nasal cavity were found.

CONCLUSIONS. Thus, clinical observations indicate significant advantages of the polymer base used for the preparation of medicinal ointments that are used for atrophic nasopharyngitis.

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