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INFLAMMATORY DISEASES OF THE NASAL CAVITY AND PARANASAL SINUSES

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Abstract

According to statistics, during the periodof epidemics, 7-9 patients out of 1,000 fall ill daily, while in the hot season the number of cases decreases significantly and amounts to 1-2 per 1,000 population [1]. The persistent epidemic of seasonal diseases, which is observed annually from September to Aprilinclusive, is explained by successivewaves of activity of various pathogens. Acute catarrhal rhinosinusitisis probably the most common disease in the world, which every person has many times in their lifetime. In addition to the fact that acute rhinosinusitis can be an independent disease, it often accompanies other viral and infectious diseases. The most common causativeagents риносинусиof acute rhinosinusitis are, of course, respiratory viruses (influenza viruses, parainfluenzaviruses, rhinoviruses, adenoviruses, MS viruses, enteroviruses, coronaviruses). It is well known that viruses pave the way for bacterial pathogens by weakening or suppressing local immunity of the mucous membranes of the upper respiratory tract. The most commonbacterial pathogens are Pseudococcusaureus, Hemophilus influenzae and moraxella. Do not forget about atypical pathogens (chlamydia, mycoplasma, pneumocysts and legionellaонеллы). Due to the lackof immunity, children suffer from acute respiratory infections more often than adultsлые, approximately 3.6 times, which is 69 thousand per 100 thousand children under the age of 14 years [2]. Systemic antibacterial drugs are often prescribed to patients with diseases of the upperних дыхательrespiratory tract rashly. Doctors ' reassessment of reasonableness prescribingsystemic antibiotics forVDD diseases can be explained by therather frequentspontaneous recovery of patients with these diseases and the incorrect judgment that systemic antibiotics prevent the development of bacterial superinfection in diseases caused by viruses [2, 3].

Introduction

The problem of choosing etiotropic therapy, as well as the type, method of administration and dose of the drug in the treatment of patients with diseases ofхних дыхathe upper respiratory tract remains very important to date. Thereare a number ofimportant questions for practicing physicians and prescribing certain antimicrobial drugs: 1. How necessary is etiotropic therapy in this particular clinicalcase, and if so, is it systemicor local? 2. What specific drugshould be prescribed and according to what scheme? 3. Another important question is whether the effectiveness of this drug has been proven in controlled clinical trials. It is no secret that over the past 30 years, fundamentally new types of antibiotics have not been developed. For us and our patients, this means that without taking drastic measures, there is a real riskоза наступления of a post-antibiotic ерavой, when commoninfections and minor injuriescan again lead to serious complications and deaths.

The document states, among other things, the need to change the tactics of prescribing systemic antibacterialdrugs – they should be usedonly in cases of absolute necessity, in compliance withthe instructionsfor specifying optimal dosages and the duration of the course of treatment. Of course, there are cases when we cannot do without prescribing systemic antibacterial drugs. Systemic antibacterial therapy is indicated only in the presence of bacterial complications, such as acute sinusitis of moderate or severe course with pronounced symptoms characteristic of sinusitis, слизистомucopurulent or purulent discharge from the nasal cavity or flowing down the back wall of the pharynx, febrile temperature of more than 37.5 °C, a feeling of fullness, pain and soreness on palpation in the projection of the affected area. sinusitis, which is accompaniedby complications from the meningesof the brain or intraorbital complications. At the same time, it should be remembered that most случcases of acute rhinosinusitis are cured spontaneously and do not requiretopical antibacterialtherapy – these data were obtained as a result of a multicenter study conducted by doctors in Canada, the Netherlands, and France [5, 6]. Following the latest recommendations on the reasonable restriction of prescribing systemic antibacterial drugs in acute uncomplicated infectious diseases of the upper respiratory tract, the mosturgent isthe use of topical antibacterial andanti-inflammatory drugs. This gives us a number of advantages: first, the ability to deliver the drug directly to the focus of infectious inflammation, second, the local use of antibacterialdrugs contributesto achieving their maximumconcentration in the focusof inflammation, third, minimal systemic exposure and, undoubtedly, the localuse of drugs reducesthe risk of infection. the risk of developingundesirable and side reactionsdoes not lead to a violation of the normal human biocenosis. Antimicrobial drugs for local treatment are prescribed in the form of insufflations, sprays and inhalations. There are a numberof requirements for medicinal productsapplied to the mucous membranes. 1. Minimal adsorption of the drug substance from the mucous membranes of the nasal cavity and paranasal sinuses and, as a result, minimal systemic effect. 2. Noinhibitory effect онмукоцитhe mucociliary clearance system. 3. Nolocal irritant effect onthe mucosa of the upper respiratory tract. 4. The widest possiblespectrumof bactericidal action against the most common pathogens of acute respiratory infections. 5. Good compliance and the ability of patients to use the drug independently. We are well aware of the topical antibacterial drug Polydex with phenylephrine, whichis used in the treatment of patients with diseases of the nasal cavity and paranasal sinuses. The drug includes two antibacterial components-neomycin and polymicsyn. In combination, these antibioticsmultiply their bactericidal effect. A corticosteroid component – dexamethasone has a pronounced проти вовоспалительнымanti-inflammatory effect. The additional substance phenylephrine is an effectivevasoconstrictor that not only improves nasal breathing, but also improves the delivery of the above-mentioned antibacterial components to the inflammatory site. Phenylephrine belongs to the group of alpha-adrenomimeticsused mainly in the treatment of patients with ear, throat and nose diseases, including those with a complicated course of rhinosinusitis. In combination with other highlyeffectivecomponents, phenylphrine helps to reduce the release of purulent and viscous secretions against the background of bacterial inflammation of the nose and paranasal sinuses. By reducing the swelling of the mucous membrane of the nasal cavity and paranasal sinuses, it also significantly reduces the feeling of pressure у пациin patients in the area of the projection of the paranasal sinuses. Polydex nasal spray with phenylephrine is available on a doctor's prescription and is used for inflammatory diseases of the upper respiratory tract (up to 5 times a day for a single injection in each half of the nose). Our clinic has previously conducted a study of the effectiveness

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of Polydex with phenylethrin in patients after surgical treatment on the structures of the nasal cavity and paranasal sinuses [7]. It is well known that the inflammation that occurs as a result of surgical trauma is an absolutely normal physiological protective reaction aimed at activating the regeneration processes of damaged tissues. Surgicalinterventions performed against the backgroundof chronic inflammation of the nasal mucosa and paranasal sinuses largely lead to the suppression of the already disturbed local protective barrier inherent слизистой оболочке верхних дыхain the upper respiratory tract mucosa. Asa result of damage to the mucous membrane ofthe nasal cavity and paranasal sinuses against the background хирур гическойof surgical trauma, a large number of active biological substances are released – inflammatory mediators, the most important of which are the so – called eicosanoids-лейкoleukotrienes and prostaglandins. The consequence of this is edema of the mucosal and submucosal layers of the multi-row cylindrical ciliated epithelium, impaired microcirculation, increased secretion of the viscous component of the nasal mucus due to changes in the ratio of cellular composition. All this leads товыincreased bleeding, formation of hemorrhagic clots (a good nutrient medium), activation ofsaprophytic microbial flora, which, in turn, increases inflammation in the early postoperative stage and leads to a slowdown in regeneration processes. Consequently, postoperative inflammation occurring in the mucosa of the nasal cavity and paranasal sinuses almost always requiresregulation. The medicaleffect on the course of the postoperative inflammatory process is necessary to reduce It is important to reduce the risk of early complications and, importantly, improve the quality of life of patients during recovery.ний, снижения риска возникновения ранних осложнений и, что немаловажно, улучшения качества жизни пациентов в период восстановленияFeatures of the courseof the postoperative period in patients after surgical interventions on the structures of the nasal cavity and paranasal sinuses dictate the need to prescribe drugs for local treatment. In this situationвается, the role of local treatment is once again emphasized due to the direct effect on the postoperative zone, the possibility of creating the optimalconcentration of the drug in the focus of inflammation, and the lack of systemic action due to very low bioavailability.

Studiesconducted in our clinic convincingly proved thatpatients who received Polydex with phenylephrine after varioussurgical interventions on the structuresof the nasal cavity and paranasal sinuses noted a rapid reduction in nasal breathing difficulties, headache, and olfactory disorders. During anterior rhinoscopy, these patients showed a more pronouncedьшedecrease in rhinorrhea and mucosal edema compared to patients who did not receive the above therapy. Thus, in the treatment of patients with acute and chronic diseasesof the nasal cavity andparanasal sinuses of bacterial nature, in the vastольmajority of cases, it is highly advisable to prescribe topical antibacterial therapy as a reasonable alternative to systemic antibacterial drugs. Polydexa with phenylephrine is characterized by a high safety profile for use in allagegroups of patients. The above-mentioned drug can also be recommended for use in casesof postoperative treatment in order to prevent complications and shorten rehabilitation periods.

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