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USE OF INTRANASAL GLUCOCORTICOSTEROIDS IN THE TREATMENT OF PATIENTS WITH CHRONIC DISEASES OF THE NOSE AND PARANASAL SINUSES

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Abstract. Chronic rhinitis and rhinosinusitis are widespread diseases worldwide, significantly affecting patients' quality of life and potentially leading to the development of comorbidities in the upper respiratory tract. Intranasal glucocorticosteroids are first-line drugs for treating acute rhinosinusitis or exacerbation of chronic rhinosinusitis in adults (including the elderly) and adolescents from 12 years of age. They serve as an auxiliary therapeutic agent during antibiotic treatment and are also used for treating acute rhinosinusitis with mild to moderate symptoms without signs of severe bacterial infection. Moreover, according to numerous studies, mometasone furoate has demonstrated its effectiveness in alleviating symptoms without causing pronounced side effects.

Keywords: allergic rhinitis, chronic rhinosinusitis, intranasal glucocorticosteroids, polypous rhinosinusitis

Relevance. The term "chronic rhinosinusitis" (CRS) is used to denote a whole group of pathological conditions that arise due to various causes and are distinguished by the diversity of the sequence of mechanisms for developing inflammation of the nasal mucosa and paranasal sinuses, lasting more than 12 weeks. According to the phenotype, CRS is divided into two types: CRS without polyps and CRS with polyps. In 25-30% of patients with CRS, polypous rhinosinusitis develops [1].

According to world literature, the prevalence of polypous rhinosinusitis (PRS) among the population ranges from 0.2 to 4%, with a male to female ratio of 2:1, respectively. It reaches its peak between 50 and 59 years of age, then decreases [2-5]. Familial predisposition was found in 14% of patients [6]. According to a study conducted in Hungary, there is a genetic predisposition to the development of PRS, even when considering the influence of various environmental factors [7].

There is a connection between PRS and other diseases. For instance, in patients with bronchial asthma, PRS occurs in 13% of cases, and conversely, in patients with PRS, the frequency of asthma reaches 45% [8]. PRS is also associated with eosinophilic granulomatosis with polyangiitis (Churg-Strauss syndrome) and ciliary dyskinesia syndrome (Kartagener syndrome) [9]. Based on morphological features, CRS can be catarrhal, purulent, purulent-polypoid, and polypoid. A distinct form is odontogenic maxillary sinusitis. According to the course of the disease, mild, moderate, and severe forms are distinguished. Depending on the etiological factors, CRS can be viral, bacterial, fungal, or caused by bacterial-fungal associations.

CRS is characterized by inflammation of the mucous membrane of the nasal cavity and paranasal sinuses, leading to nasal congestion, nasal discharge, headache or pressure predominantly in the area of the paranasal sinuses, decreased or absent sense of smell, and sleep disturbance, which

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also affects the quality of life. Endoscopic examination reveals mucopurulent discharge and/or swelling of the mucous membrane in the middle or upper nasal passage, changes in the mucous membrane of the osteomeatal complex, and changes in the mucous membrane as shown by computed tomography [10, 11].

According to global literature, rhinitis is classified into three phenotypes: allergic, infectious, and non-allergic non-infectious [12]. Chronic non-allergic rhinitis is characterized by the absence of allergy symptoms or the presence of specific triggers, which allows for its division into eight subtypes: non-allergic rhinitis with eosinophilic syndrome, atrophic rhinitis, age-related rhinitis, food-induced rhinitis, medication-induced rhinitis, idiopathic rhinitis, hormonal rhinitis, and occupational rhinitis.

Research objective. To conduct a review of available literature on the effectiveness of intranasal glucocorticosteroids in treating various forms of chronic inflammatory diseases of the nose and paranasal sinuses.

Materials and methods. The research was carried out from 2023 to 2025 at the multidisciplinary clinic of Tashkent State Medical University. The analysis included 250 patients with combined injuries of the nose and paranasal sinuses. Patients were divided into three main groups:

Group 1: 91 people with trauma to the frontal sinus walls.

Group 2: 92 people with injuries to the walls of the maxillary sinus.

Group 3: 67 people with injuries to the walls of the ethmoid sinus.

In all patients, the injuries were accompanied by maxillofacial and brain trauma. The age of the patients ranged from 18 to 68 years, with men comprising 78.8% (n=197) and women 21.2% (n=53). All patients were admitted to the hospital after receiving emergency medical care. For diagnosis and monitoring, the following examinations were conducted:

The clinical effectiveness of mometasone furoate nasal spray combined with its safety and tolerability profile confirms its favorable benefit-risk ratio [1, 2]. In a study conducted by S.E. Baena-Cagnani and R. Patel, it was demonstrated that after 4 weeks of daily use of mometasone furoate in children aged 3-11 years suffering from perennial allergic rhinitis (AR), nasal bleeding occurred in 4% of cases, compared to 5% in children who received placebo [3]. Currently, long-term intranasal glucocorticosteroid (IGCS) treatment is the primary method for managing exacerbations of chronic rhinosinusitis (CRS) and AR, including the prevention of relapses after polyp removal in polypoid rhinosinusitis. Surgical intervention is only considered if the effectiveness of this treatment is insufficient.

The aim of surgical treatment is to correct anatomical abnormalities present in the patient, such as a deviated nasal septum, hypertrophied inferior turbinates, bullous middle turbinates, polyps, and other pathological tissues that block the openings of the paranasal sinuses and impede their adequate ventilation. It should be noted that surgical treatment of patients with chronic rhinosinusitis (CRS) with concomitant allergic rhinitis (AR) is possible after preliminary preparation aimed at alleviating allergy symptoms. At the same time, even after successful

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surgical intervention, it is not possible to completely eliminate AR manifestations. Thus, anti-inflammatory therapy plays a significant role in the treatment of patients with CRS, especially in cases of concomitant perennial AR [4]. In a study involving 135 patients with chronic rhinosinusitis and concomitant bronchial asthma, the best result was achieved in the group receiving mometasone furoate (74.2%), compared to the group receiving oral antihistamines (68.2%) [5].

Result. A study conducted in Turkey using the Sniffin' Sticks olfactory test compared the effects of mometasone furoate and montelukast on olfactory function in 30 patients with seasonal AR lasting at least 1 year. According to the obtained data, mometasone furoate surpasses montelukast in restoring olfactory function by reducing inflammation in the olfactory area and increasing airflow [6]. Mak K.K. et al. compared the effectiveness of mometasone furoate (at a daily dose of 100 mcg) and fluticasone propionate (100 mcg daily) in children with allergic rhinitis (AR). After 4 weeks of therapy, the group of patients using mometasone furoate showed more pronounced clinical results in suppressing nasal symptoms compared to the control group [7]. It is also noteworthy that the use of mometasone furoate significantly reduces the manifestations of ocular symptoms, which accompany AR in 40% of cases [8, 9].

Conclusion. Thus, the treatment of chronic rhinosinusitis and rhinitis should begin with conservative therapy. Summarizing the research data, we can conclude that the use of mometasone furoate improves patients' quality of life by reducing the clinical manifestations of acute sinusitis or exacerbations of chronic sinusitis.

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