

INFLUENCE OF INHALATION CORTICOSTEROIDS ON THE STATE OF THE ORAL CAVITY IN PATIENTS WITH BRONCHIAL ASTHMA

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This article discusses corticosteroidal bronchial asthma, its etiology and possible manifestations on the oral mucosa caused by the side effects of inhaled hormonal drugs

According to the WHO, in 2017, about 235 million people worldwide suffered from asthma and this figure is projected to increase to 400 million by 2025. Urbanization is considered to be a possible reason for this trend.

Key words: bronchial asthma, hormonal drugs, manifestations.

Introduction. One of the urgent problems of modern medicine is the study of the etiology, pathogenesis, issues of increasing the effectiveness of treatment and prevention of the most common dental diseases in patients with chronic general somatic pathology (Grudyanov A.I. et al., 2004; Kazarina J.I.H. et al. ; 2008, Lukinykh L.M., 2004; Rabinovich O.F. et al., 2004) [13].

The relationship between general somatic diseases and the state of the oral cavity is carried out through various types of homeostasis (metabolic, immunological, etc.), violations of which lead to various diseases of both the whole body and the oral cavity (Ibragimov T.I., 2001, 2002; Nuurra T., 1984, 1985; Matricardi PM et al; 2000; Faria AM, Weiner HL, 2005; Hasturk H. et al., 2005) [7].

The oral cavity is an ecological system in which external factors interact with internal (periodontal; bacterial community, local immune system, epithelium of the oral mucosa, oral fluid, etc.). All components of the oral cavity are the initial link in the digestive tract and are in dynamic equilibrium [3].

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Asthma is a major global health problem affecting all age groups with a global prevalence ranging from 1% to 21% in adults [21].

There is an increase in the incidence of bronchial asthma (BA) in the districts and cities of the Tashkent region from year to year. For example, the incidence in 2012 (11.03 per 10,000 population) compared to 2005 (0.06) increased 1.3 times. Analysis of the gender difference in the incidence of bronchial asthma showed the highest morbidity among women than among men (54.2: 45.8), and it is also more common in people of working age. In the districts of Yangiyul, Okkurgon, Chinoz, Parkent, Zangiota, Bustonlik, the incidence rate is much higher than in other districts of the region [17].

BA is a heterogeneous disease that is usually characterized by the presence of chronic inflammation of the airways. It is determined by a history of respiratory symptoms such as wheezing, shortness of breath, chest congestion and coughing, the severity of which changes over time, as well as variable limitation of the expiratory air flow rate [1, 12, 18].

The factors leading to the onset and development of BA include atopy (hay fever, allergic rhinitis, urticaria) [16].

Patients suffering from BA, regardless of the severity of the disease, need drugs that control the number of exacerbations of this pathology, namely, medications that are taken daily and help to achieve and maintain a therapeutic effect. These medicines are called differently: preventive or maintenance, prophylactic; it also includes long-acting bronchodilators, anti-inflammatory drugs. The most effective drugs for asthma control, used as monotherapy, are currently inhaled hormonal drugs (IHD) (GINA, 2011). Scientific studies have shown that it is they that effectively reduce the severity of BA symptoms, reduce bronchial hyper-reactivity, inhibit inflammation in the airways (Jeffery R.K., 1992), reduce the frequency and severity of exacerbations (Pauwels RA et. All, 1997)

and the frequency of death with AD (Suissa S. et. all, 2000), lung function and improve quality of life (Juniper EF et. all, 1990). [14, 4, 11, 20].

Local complications caused by IHD include dysphonia and cough due to irritation of the upper respiratory tract, as well as oropharyngeal candidiasis (GINA, 2011).

In inflammatory periodontal diseases and bronchial asthma, most likely, there is a single immune-inflammatory nature of occurrence, affecting both the oral cavity and the respiratory tract. A significant influence is exerted by a decrease in the barrier properties of the oral mucosa in patients with bronchial asthma, which creates unfavorable conditions for the hard tissues of the tooth and periodontium, increasing the effect of microflora and other pathogenic factors. There is information about the presence of disorders in the immune system in patients with bronchial asthma, predisposing to the onset of periodontal diseases of an inflammatory nature. From literary sources it is known that a number of scientists were engaged in this problem (Emelyanov A.V., 2000; Knyazhenskaya N.P., Potapova M.O., 2003 [8]).

The presence of chronic inflammation of the respiratory tract, allergic diseases leads to a weakening of the macroorganism, the appearance of dysbiosis (and then candidiasis), as well as a decrease in local immunity in the oral cavity [4, 5].

Bronchial asthma has a pronounced effect on the state of hard tissues of teeth, oral mucosa and periodontal tissue. Thus, KPU (the index, where K is the number of carious teeth, P is the number of treated teeth, U is the number of teeth removed or to be removed teeth) more than 20 is observed in 92.9% of patients with bronchial asthma, non-carious lesions of the teeth are observed in 72.3% of the examined, inflammatory periodontal diseases are detected in 100% of cases, tongue swelling in 30%, petechiae of the oral mucosa in 70%, dryness lips in 55%. The greatest disturbances in the oral cavity in bronchial asthma occur in the periodontal tissues. It was revealed that the degree of chronic generalized periodontitis is closely related to the severity of bronchial asthma, the age when it was first diagnosed, and the duration of the course. Deficiency and imbalance of the studied macro- and microelements in various biological environments, characteristic of bronchial asthma, can cause increased susceptibility of periodontal tissues to infection, slow down reparative activity, lead to metabolic and structural changes in the oral cavity. In patients with bronchial asthma with chronic generalized periodontitis, a significant prevalence of atypical vascular reactions of the periodontal tissues was established, which is associated with disorders in the microcirculatory link of the vascular bed. In patients with chronic periodontal diseases against the background of bronchial asthma, who received inhaled glucocorticosteroid therapy, a decrease in the primary immune response in the oral cavity was found, which, along with a decrease in autoimmune processes, contributes to the chronicity of pathological changes in the periodontium with more pronounced impairments from both nonspecific factors and the immune defense of the oral cavity, with the most significant changes observed in patients with hormone-dependent bronchial asthma. Patients suffering from hormone-dependent bronchial asthma have a more severe course of CGP (chronic generalized periodontitis), which is expressed in greater destruction of the periodontal bone tissue, and bleeding and the level of inflammation are not significantly increased. [8, 14].

It has been proven that the using of inhaled glucocorticoids causes a shift in the acid-base balance towards acidosis, a change in the level of pro- and anti-inflammatory cytokines, the concentration of oral fluid lysozyme, and a direct relationship has been established between the duration of taking this group of drugs and the severity of these complications. [15].

OCM paresthesia is a polyetiological disease that most often develops against the background of various internal diseases [2, 9, 18], while taking various medications for the underlying disease can be a trigger factor that causes the main symptom of paresthesia - burning in the cavity [22].

It was found that clinical manifestations and symptoms of oral mucosa paresthesia are secondary in nature, as a reflection of the underlying general disease (BA), and are also a

consequence of a decrease in the immunological status of the oral cavity and changes in the microbial landscape as a result of the negative effects of inhaled hormonal drugs [6].

The study of data obtained using laser Doppler flowmetry (LDF), with an assessment of the level of the acute phase protein of inflammation of lactoferrin in saliva, shows a decrease in the level of microcirculation equally in both the maxilla and mandible. The most pronounced disturbances of microcirculation in periodontal tissues in the group with combined pathology (periodontitis against the background of bronchial asthma). The high information content of a comprehensive study of the microcirculation of periodontal tissues and the level of lactoferrin in saliva in the diagnosis of microcirculatory disorders and the degree of inflammation activity makes it possible to use this technique for early detection of disorders in the periodontal tissues in patients with periodontitis on the background of bronchial asthma and without identified organ pathology [10].

Thus, a review of the literature and analysis of various studies allows us to assert that bronchial asthma is a common pathology with multiple manifestations on the oral mucosa, which are a side effect of inhalation hormone therapy.

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