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DIAGNOSIS AND TREATMENT OF SINUSITIS OCCURRING IN HOT CLIMATES

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Abstract:

The nasal cavity and its mucous membrane as an object of research from a functional and morphological point of view, the human respiratory system consists of tissues and organs that provide pulmonary ventilation and pulmonary respiration. The airways include: nose, nasal cavity, nasopharynx, larynx, trachea, bronchi and bronchioles. The nose and nasal cavity serve as conductive channels for air, in which it is heated, moistened and filtered, olfactory receptors are enclosed here, and, in addition, the nasal cavity is the first barrier to protect the lower respiratory system. By the septum nasi nasal septum (bony at the back and cartilaginous at the front), the nasal cavity is divided into two symmetrical halves, which communicate with the atmosphere from the front through the outer nose with the help of nostrils.

Keywords: allergic rhinitis, bronchial asthma, glucocorticosteroid, otorhinolaryngology, magnetic resonance imaging, meningoencephalocele, paranasal sinuses, acute rhinosinusitis.

RELEVANCE. Great importance in modern rhinology is attached to the functioning of the atrial fibrillation of the nasal cavity as one of the main components of the barriers to its protection [4,5,6;]. The cells of the ciliated epithelium have up to 200 cilia at the free end, which are cytoplasmic filaments 4.0-5.0 microns long and 0.2-0.3 microns wide, covered externally with a membrane [4]. There are 12 11 fibrils under the membrane: 2 central single and 9 peripheral double. There is a dense basal body in the cytoplasm, on which they are fixed and from which one or more filaments with a transverse striation of 80-100 Å thick run. The number of cilia decreases in the direction from the middle third of the lower nasal concha to the vestibule, they are absent in the multilayer epithelium [1;2]. Also, on the apical surface of the cells there are microvilli with a diameter of about 0.1 microns containing microfibrils; with their help, epithelial cells can absorb liquid from the surface [4].

According to scanning microscopy, the following types of ciliated cells have been described according to the degree of differentiation of the apical surface: 1) cells in the phase of formation of basal bodies and axonemes. There are no cilia on the apical surface; 2) cells in the phase of moderate ciliogenesis and cilia growth. On the apical surface of the cells, ½-⅓ of the length of the cilia of a differentiated cell appears; 3) cells in the phase of active ciliogenesis and cilia growth. The apical surface of the cells is almost entirely covered with cilia, the size of which corresponds to the size of the cilia of cells in the previous phase of ciliogenesis; 4) cells in the phase of completed ciliogenesis and cilia growth. The cilia of adjacent cells are oriented in the same direction [14]. The epithelial surface of the nasal cavity is covered with mucus [13]. It is produced by goblet cells, which belong to the unicellular endoepithelial glands, as well as numerous mucous and serous glands located in their own plate [4;14]. The cilia of the ciliated epithelium produce coordinated movements at a speed of 13-14 per minute, contributing to the movement of mucosal secretions with microorganisms, dust particles and other 13 foreign bodies settling on it towards the nasopharynx, which ensures its constant purification – clearance [11]. In addition to the mechanical removal of particles, specific and non-specific protective factors of the mucous membrane are also of great importance. Specific factors include immunoglobulins of classes G, A, M, E, D, non–specific - mucus glycoproteins (fucomycins, sialomycins, sulfomycins), lysozyme, lactoferrin, secretory glucosidases, interferon, complement, secretory proteases. Thanks to them, antiviral, antibacterial protection, and neutralization of toxins are carried out [7;8;]. The nasal cavity has a rich blood supply by branches of the external and internal carotid arteries, forming an extensive network of anastomoses in its mucous membrane [9].

The second-order arteries involved in the blood supply to the nasal cavity are: a. maxillaris interna is the largest branch of the external carotid artery and A. ophthalmica is a branch of the internal carotid artery. A. maxillaris interna is topographically divided into 3 divisions: mandibular, suspensory and pterygoid [11]. In the cranial department, located in the cranial fossa,

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3 branches branch off from the maxillary artery, of which the main thoracic artery is the most important in clinical terms (a. sphenopalatina), penetrating into the nasal cavity through the orifice of the same name and supplying blood to the lateral wall of the nasal cavity (posterior nasal branches), all paranasal sinuses and nasal septum (posterior artery of the nasal septum). The basal palatine artery is divided into 3 main branches, 2 of which are directed to the anterior-inferior part of the nasal septum and their terminal branches form a large network in this area (Kisselbach zone). The ocular artery (a. ophthalmica) departs from the internal carotid artery immediately after entering the cranial cavity. Penetrating into the orbit together with the optic nerve, in its upper medial part it gives off the anterior and posterior latticed arteries, which penetrate through the medial wall of the orbit, 14 anterior cranial fossa, perforated plate into the nasal cavity, feeding the posterior-upper part of the lateral wall and septum of the nose, as well as the latticed sinus [5]. Venous outflow is carried out through veins that repeat the course of the arteries, mainly through the anterior facial vein (v. facialis anterior) and the ocular vein (v. ophthalmica). The venous system of the nasal cavity anastomoses with the external nasal plexus, the veins of the pharynx, the deep veins of the pterygoid fossa, the internal maxillary vein, the veins of the orbit and through them with the cavernous sinus, the sinuses of the dura mater and the venous plexuses of the soft meninges [4; 10]. The blood supply to the nasal cavity has a number of features [6].

THE PURPOSE OF THE STUDY. To create an adequate therapeutic and diagnostic algorithm for orbital rhinosinusogenic complications due to early and maximally accurate diagnosis and ethnopathological effects on the main factors of the occurrence and development of these complications through the implementation of a comprehensive treatment method including functional endoscopic rhinosinus surgery, hyperbaric oxygenation and regional indirect endolymphatic administration of antibacterial drugs

MATERIALS AND RESEARCH METHODS. In the period from 2015 to 2019, 129 patients with chronically purulent (63 patients) and purulent-atrophic sinusitis (66 patients) were under our supervision who were treated at the Department of Otorhinolaryngology at the clinic of the Andijan State Medical Institute, as well as in a multidisciplinary children's polyclinic.

The age composition of patients with chronic purulent and purulent – atrophic forms of inflammation is reflected in tab.1. The highest frequency of purulent form is observed at the age of 17-35 years, followed by a decrease in the number of diseases as the age increases.

THE RESULTS OF THE STUDY. We observed 66 patients with purulent-atrophic sinusitis. Before admission to us, all patients were treated according to the traditional method and their improvement occurred at the time of treatment, and after discontinuation of treatment, all symptoms of the disease recurred. Therefore, this treatment is regarded by us as not effective.

The main proportion of patients with purulent – atrophic sinusitis admitted to the hospital falls during the hot period of the year. So, starting in April, the number of these patients increases sharply, and their proportion remains at a high level throughout the summer period. With the onset of the rainy period, the number of these patients sharply decreases, which is obviously explained by an increase in humidity and a decrease in temperature and dustiness of the air, i.e. the factors contributing to the development of exacerbation of purulent-atrophic sinusitis decrease.

According to a number of authors, as with purulent-atrophic sinusitis, pain can be diffuse and localized on the side of the lesion: in the sinus, temple, eye socket, forehead, or have the character of trigeminal neuralgia (Likhachev A.G., 1984). It can be seen from the tables that these manifestations were also present in our patients. At the same time, pain in the cheeks occurred in 48.5% of patients (in group I) and 53.3% (in group II) with acute processes and in 57.5% (in group I) and 62.8% (in group II) with chronic processes. Forehead pain in 25.7% (in group I) and 30% (in group II) with acute sinusitis and in 17.5% (in group I) and 17.1% (in group II) with chronic sinusitis. Pain in the nasal root area in 8.5% (in group I) with acute sinusitis and 5% (in group I) and 2.8% (in group II) with chronic sinusitis. A number of authors believe that pain syndrome may be absent in a significant part of patients. Thus, V.T. Palchun and N.A. Preobrazhensky (1980) believe that local pain may be absent with a good outflow of contents, despite purulent damage to the ONP. In our case, there were 17.3% (in group I) and 16.7% (in group II) of such patients with acute sinusitis and 20% (in group I) and 17.3% (in group II) with chronic sinusitis. The next most common manifestation of inflammation is nasal discharge and the presence of a "purulent stripe" in the middle nasal passage (a symptom of Zabolotsky-Desyatkovsky-Frenkel) (Likhachev A.G., 1984).

Nasal discharge was observed in both acute and chronic processes in 100% of cases. Moreover, in the

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acute process, there was more discharge of a purulent nature – in 42.9% (in group I) and 33.3% (in group II). In the chronic process, mucosal discharge was more pronounced in 52.5% (in group I) and 48.5% (in group II). This is due to the fact that with purulent-atrophic sinusitis, it often develops against the background of pathological changes in the nasal cavity (curvature of the nasal septum, close contact of the middle nasal concha with the lateral wall of the nose, hypertrophy of the middle nasal concha, etc.), which leads to difficulty in the outflow of secretions from the sinus and the absence of purulent discharge (Preobrazhensky B.S. and co-author, 1968, Likhachev A.G., 1984). The third leading clinical sign of inflammation in purulent-atrophic sinusitis is difficulty in nasal breathing associated with edema and infiltration of the nasal mucosa, which occurs as a result of irritation of its pathological discharge from inflamed sinuses (Likhachev A.G., 1984). The data of S.Z. Piskunov (1975, 1985) indicated that the inhibition of the transport function of the atrial fibrillation occurs under the action of toxins produced by Staphylococcus aureus. In our work, inhibition of the transport function of the atrial fibrillation was noted in chronic sinusitis in 100% of cases (both in groups I and II), in acute sinusitis in 82.9% (in group I) and 73.4% (in group II). We have analyzed in detail the complaints of patients, the clinical manifestations of the disease and the features of some functional disorders in patients with purulent-atrophic and purulent sinusitis.

All the complaints that occurred in patients with purulent-atrophic sinusitis could also be caused by atrophic rhinitis. In 56 (93.3%) patients, one of the main complaints was precisely dry nose, which is not a characteristic symptom of purulent sinusitis.

The second most frequent complaint among our patients was complaints of recurrent nosebleeds. This symptom was observed in 35 patients. Among patients with chronically purulent sinusitis, complaints of nosebleeds were observed in 3 (4.3%) patients. Here, the nosebleed was caused by a pronounced inflammatory process of the nasal mucosa.

One of the main complaints of patients with purulent-atrophic sinusitis was the presence of nasal odor, which occurred in 56 (93.3%) of 60 patients. Of the NCDs, 29 (48.3%) patients noted the appearance of nasal odor during a certain period of the disease, which previously, despite the presence of dryness in the nose, was absent.

Among the patients we examined, only 6 complained of headache of various localization. Complaints of headache in chronic purulent sinusitis were found in 67.2% (46 patients) of cases. At the same time, patients with purulent - atrophic sinusitis very often complained of a feeling of heaviness in the projection of the diseased sinus. This complaint is not typical for other forms of sinusitis. We observed this symptom in 42 (70%) patients.Complaints of purulent nasal discharge, so characteristic of patients with purulent sinusitis, are rarely noted in the purulent-atrophic form of sinusitis. During the exacerbation of the process, only 11 (18%) patients complained of scanty nasal discharge. They were thick, viscous with an unpleasant odor and usually flowed into the nasopharynx. In purulent sinusitis, 97.5% (67 patients) had complaints of purulent nasal discharge. 53% (32 patients) with purulent-atrophic sinusitis complained of difficulty breathing. Complaints of difficulty breathing among patients with chronically purulent sinusitis were observed in 74.2% (51 patients). One of the constant complaints of patients with purulent-atrophic sinusitis was a decrease or lack of sense of smell in 50 (83% of patients).

CONCLUSIONS. The prevalence of chronic sinusitis in Uzbekistan is approximately the same among both urban and rural populations and amounts to 8.2 and 9.6 per 1,000 inhabitants. Sinusitis is dominant among sinusitis, poly- and pansinusitis take the second place, and frontitis takes the third place.

Among the various forms of inflammatory processes of the paranasal sinuses in Uzbekistan, a large proportion is occupied by the purulent-atrophic form, which is actually absent in the regions of the country with a temperate climate.

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