IMPROVING SURGICAL TREATMENT METHODS FOR PATIENTS WITH NASAL PATHOLOGY

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Abstract. *The nasal cavities are two channels separated from each other by an osseocartilaginous septum. The nose is connected to the external environment through the nostrils, which open to the nasopharynx through channels called choanae.*

The lateral wall of the nasal cavity is an uneven surface: it is covered with mucous membrane and contains three bony plates (sometimes 4) that form the nasal concha. In each nasal cavity, the lower, middle, high and sometimes high passages are distinguished.

Keywords: *ethmoid cells, sphenoid sinuses, frontal sinuses, maxillary sinuses.*

The cavities of the passages are called passages, they are connected with the nasal passages. Paranasal or paranasal sinuses are air-filled cavities of the facial mass that develop in the first years of life and are a continuation of the nasal passages.

Maxillary sinuses: two large symmetrical cavities located below the orbits

Frontal sinuses: irregular in shape, they enter the thickness of the frontal bone above the root of the nose.

Sphenoid sinuses: two cube-shaped cavities located in the sphenoid bone

Ethmoid cells: a complex system of small cavities that form two ethmoid labyrinths.

The nose has a number of different functions:

Respiratory function: The nose regulates the flow of air through highly complex central systems that regulate the correct amount of oxygen according to the different needs of the body. The function of heating and humidifying the breathing air through an efficient system of vascularized "siphons" (turbinates), which can increase or decrease in volume depending on the air temperature. By expanding, they provide more heat and high humidity. By shrinking, by increasing the size of the nasal cavity, more air passes through. Protective function: provided by a number of systems that create a barrier against large particles, microparticles and pathogenic microorganisms. Voice resonance: especially when pronouncing certain phonemes. Several hypotheses have been put forward about the activity of the paranasal sinuses:

These sinuses help to lighten the weight of the skull, which would otherwise be too heavy.

Protecting the base of the skull in case of injury.

Thermal insulation of more vulnerable structures.

Creating resonance during pronunciation.

Inflammatory diseases of the nasopharynx and paranasal sinuses

Rhinitis - the most common form of acute inflammation of the nose is represented by acute epipodemic rhinitis. This disease is usually called a cold or a runny nose. It is caused by viral etiology, in particular, rhinovirus and parainfluenza viruses. It is characterized by nasal obstruction of the airways associated with a lot of runny nose. Possible bacterial infections are characterized by mucous purulent discharge. hypertrophy, pneumatization of the middle turbinate) helps to ventilate the nose with activation during acute and chronic inflammation. These factors must be

surgically corrected (see malformations and post-traumatic maxillofacial problems). A significant part (20%) of nasal inflammation is allergic rhinitis. This form occurs as a result of the body's immune response to certain external factors called allergens. There are seasonal allergens (for example, pollen) and chronic allergens (for example, dust). mites, animal hair). Symptoms are accompanied by nasal airway obstruction, clear discharge from the nose, sneezing, itching, decreased smell, tear discharge (allergic oculorinitis). Diagnosis is made by endoscopic examination of the nose using a flexible optical fiber probe, as well as treatment using special tests to identify allergies. Treatment includes antihistamines, local corticosteroids in conditions of low systemic absorption and possible sublingual vaccination. Similar symptoms are characteristic of another form of rhinitis, which is not related to allergens and is called pseudoallergic or vasomotor rhinitis. In this case, the symptoms described above are caused by thermal, chemical, optical, mechanical irritants (for example, light, heat, exposure to colds and others) The above-mentioned medical therapy has little effect on this type of rhinitis. It is often necessary to resort to reducing the swelling of the lower nasal passages with the help of diathermo surgery or exposure to radio frequencies (see: Turbinoplasty). Sinusitis is an inflammation of the sinuses. There are three types of sinusitis. First: acute sinusitis, a type of inflammation that spreads very quickly and affects the body, and is treated with appropriate medications. Second: subacute sinusitis, which can last up to three months and can be treated by choosing special therapy. Third: chronic sinusitis, which occurs due to repeated acute episodes or due to insufficient treatment of previous infections. Sinusitis can be viral, bacterial or fungal. To assess sinusitis in any case, a number of predisposing factors should be taken into account, for example, structural changes in the nose, immunodeficiency, dental infections, etc. The most common symptoms of sinusitis are: frequent purulent nasal discharge, pain in the facial area with sinus involvement, reduced or complete lack of smell In addition to a complete analysis of the symptoms reported by the patient, it is very important to conduct a fibroendoscopic examination using a flexible fiber optic probe. computed tomography of the facial skeleton Finally, based on the clinical presentation (acute, subacute, chronic sinusitis), age and analysis, the general health of the patient, his tolerance to certain types of drugs, procedures and procedures, prescribing drug therapy or can apply surgery.

Nasal polyp is a multifactorial disease characterized by swelling of the subnasal mucosa with polyp formation.

Polyps are represented by thickened sacs of the mucous membrane, which grow and cause frequent recurrence of inflammatory events, which are allergies, fungal infections, aspirin intolerance, autoimmune diseases (Churg-Strauss syndrome), nasal tumors (is facilitated by symptomatic polyposis). in the functions of the mucous membrane. Polyposis is accompanied by such symptoms, nasal congestion, clear discharge (nasal hydrorrhea), decreased or complete loss of smell, voice change (nasal voice). The diagnosis is made through endoscopic examination using a flexible fiber optic probe, which allows you to determine the size of the polyps and the degree of obstruction of the nasal passages. Also, non-contrast computer tomography and allergological analyzes are prescribed for more accurate identification. determine the course of treatment. The following types of therapy can be selected based on the analysis of the clinical appearance (level and severity of polyposis), age and general health of the patient, his resistance to certain types of drugs, treatments and procedures. Drug therapy including topical corticosteroids (nasal spray) or, in more severe cases, systemic administration (oral or intramuscular). In cases of massive polyposis, as well as when drug therapy is ineffective or the patient cannot be treated with long-

term cortisone for various reasons, surgical treatment is the only option. The surgical method called FESS (Functional Endoscopic Sinus Surgery) uses an endoscope and divides the polyps into pieces and then a special tool (microdebrider) that sucks them up. This method ensures complete removal of polypoid tumors and restoration of the normal physiological environment and anatomy of the patient's nose. This type of operation usually does not involve touch. There are no external tissue incisions or nasal tampons. The patient is discharged in the morning after surgery with a 24-hour hospital stay. An eight-to-ten-day home recovery period is recommended to reduce the risk of postoperative bleeding. Two outpatient visits. Dressing, scar control, and intranasal secretions are recommended at one week postoperatively.

DEVELOPMENTAL DISORDERS AND POST-TRAUMATIC PATHOLOGIES OF THE NOSE

This category includes pathologies such as deviation of the nasal septum, which is represented by a violation of the osteochondral membrane that separates the two nasal cavities. The pathology can be caused by developmental disorders of the facial skeleton (in this case, we are talking about a congenital disorder) or injuries. received in childhood (later we will talk about the acquired disorder) Shifting of the septum is often accompanied by compensatory hypertrophy of the nasal passages in the nasal cavity opposite to the convexity of the septum. The patient has difficulty breathing, which leads to breathing through the mouth, snoring at night, frequent rhinitis, and in some cases, sinusitis caused by poor ventilation, which in turn leads to constant inflammation of the paranasal sinuses and nasal mucosa. will come. The only solution in this case is surgery to repair the membrane of the nasal septum. This operation is called septoplasty and is aimed at functional improvement of the patient's nasal breathing. The operation is performed under general anesthesia and involves making a small incision inside the nose (which remains invisible), cleaning the mucous membrane that covers the nose, and correcting the septum by removing part of the cartilage and bone. There is no need to use nasal packs, which once turned the postoperative period into an irritating and painful process. In modern surgery, thin silicon plates are used, which are placed between the septum and the concha, thus preventing postoperative adhesions. The patient is discharged the next morning after the operation, with a total of 24 hours of hospital stay. It should be noted that surgery on the nasal septum does not affect the aesthetics of the nose in any way. It is intended only for functional correction. At the request of the patient, the procedure of functional aesthetic correction of the nasal pyramid can also be included (see rhinoplasty). Nasal Fracture - Because of its location, the nasal pyramid is most at risk for facial injuries, so nasal fractures are a relatively common occurrence. A broken nose is accompanied by bleeding, swelling, swelling of the nose, in some cases, open wounds on the skin and / or fractures of other bones of the facial skeleton. Early detection of nasal bone fractures guarantees prompt surgical treatment. Reduction of the fracture allows alignment of the bone cones. After the injury, the operation should be performed within 7-10 days, because after this period, the nasal bones cannot do anything else. due to the abnormal consolidation of its segments, it can be re-aligned. In this case, there is a risk of dimorphism of the nasal pyramid, and rhinoplasty is necessary (see Rhinoplasty).

TUMORS OF THE NOSE AND PARANASAL SINUSES

The facial skeleton consists of different histological structures, and therefore different types of tumors can occur. Benign tumors - Benign tumors of the nasal cavity and paranasal sinuses include fibromas, bleeding fibro angiomas, osteomas (bony in nature, often located in the frontal

sinus), and papilloma. A special form of papilloma is called transitional cell papilloma. is called: a benign neoplasm, characterized by a specific tendency to deepen with possible erosion of the surrounding bone structures. This type of papilloma can only be treated surgically using modern nasal endoscopic methods, this tumor is minimally invasive method guarantees complete removal, minimizing trauma. Malignant tumors - Malignant tumors of the nasal cavity and paranasal sinuses make up 1% of all malignant tumors. Special working conditions (especially in woodworking and leather industry) can cause constant chronic inflammation, which can lead to progressive paralysis of the mucosal system. can occur with a tooth. tumor transformation of some cells. In nasosinus tumors, very delicate areas of the face bordering the eyes, meninges and skull are affected. Therefore, both surgery and radiation therapy are very invasive and destructive methods. In this case, early diagnosis is very important. From a histopathological point of view, there are: squamous cell carcinomas (most), adenocarcinomas (very common), melanoma, mucoepidermoid carcinomas (formed in the extra salivary glands), lymphoid cystic carcinomas or cylinders, neuroblastomas (malignant tumors arising in the olfactory epithelium).

CONCLUSION

The diagnosis is based on subjective signs that must be evaluated very carefully:

nasal obstruction 0-90% of airways

nosebleeds

frequent purulent discharge from the nose, usually unilateral (rhinopyorrhea)

unpleasant smell (cacosmia)

pain

However, these symptoms are associated with frequent cases of rhinitis or rhinosinusitis, which often leads to late diagnosis of cancer when external symptoms or secondary adenopathy appear. Therefore, for diagnostic purposes, endoscopic examination of the nose using flexible and rigid fiber optic probes, which allows not only to detect neoplasia, but also to perform a biopsy at the same time, is of great importance. Computed tomography of the facial mass or evaluation of the images obtained by means of magnetic resonance using a contrast medium allows to accurately determine the extent of the disease and choose the best method of therapy. We can use surgery, radiation, or chemotherapy to fight cancer tumors. Surgical intervention includes endoscopic methods using special and laser technologies, as well as traditional surgical methods, depending on the condition of the specific cancer tumor. In the case of tumors of large size and volume, it may be necessary to remove the bony structures of the facial skeleton. It is recommended in combination with postoperative radiation therapy (except for rare early forms). The exclusive combination of radiation and chemotherapy is used only in extreme non-surgical cases.

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