

# Clinical and Morphological Characteristics of Benefits of the Nose and Paranasal Sinuses

**Gayrat Lutfullaev<sup>1\*</sup>, Nasiba Safarova<sup>1</sup>, Uktam Nematov<sup>1</sup>, Shakhodat Kobilova<sup>1</sup>, Adham Ortikov<sup>1</sup>**

<sup>1</sup>Samarkand State Medical Institute, Department of Otorhinolaryngology, FPDO  
Lutfullaev Gayrat Umrullaevich MD, DSc, Associate Professor of the Department of  
Otorhinolaryngology, FPDO

ORCID iD <https://orcid.org/0000-0002-2263-3840>

Address: Uzbekistan, Samarkand, st. Amir Temur, 18, Department of Otorhinolaryngology, FPDO  
phone number (+99890) 50550095; Email: [gayrat7575@mail.ru](mailto:gayrat7575@mail.ru)

Safarova Nasiba Iskandarovna Assistant of the Department of Otorhinolaryngology, Faculty of  
Postgraduate Education

Nematov Uktam Suyunovich Assistant of the Department of Otorhinolaryngology, Faculty of  
Postgraduate Education

Kobilova Shakhodat Shokirovna Assistant of the Department of Otorhinolaryngology of the Faculty of  
Postgraduate Education

Ortikov Adham Abdusodikovich Assistant of the Department of Otorhinolaryngology, Faculty of  
Postgraduate Education

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Sh.Sh., Ortikov A.A.

**Abstract:** A modern literary review, the characteristic of the clinical and morphological features of benign neoplasms of the nose and paranasal sinuses is focused on the early identification of the symptoms of this pathology. However, early diagnosis and treatment of benign neoplasms of the nose and paranasal sinuses plays an important role

**Key words:** *nose and paranasal sinuses, benign neoplasms, surgical treatment.*

## Introduction

According to the scientific literature, the predisposing factors for the occurrence of benign nasal tumors and SNP are chronic inflammatory diseases of the upper respiratory tract, nasal trauma, pregnancy, and colds [3, 4, 8].

The generally accepted division into benign and malignant in relation to neoplasms of this localization is not easy to carry out, since some types of benign neoplasms are malignant, in addition, the topographic proximity and common development of the neurocranial and viscerocranial parts of the head, the thinness of the bones of the facial skeleton, collapsing even from the pressure of a growing benign neoplasm, cause the possibility of the penetration of tumors from the face into the neurocranial and vice versa [5, 10]. And most importantly, even benign neoplasms can disrupt the functions of the organ, thereby acting as malignant.

**Purpose.** Using informative methods, reliably determine the morphological structure and histological types of benign neoplasms of the nose and paranasal sinuses.

**Research material.** The work is based on the results of the analysis of the morphological structure and histological types of benign neoplasms of the nose and paranasal sinuses.

**Results.** Knowledge of the symptoms and clinical picture of benign neoplasms of the nose and paranasal sinuses leads to early detection, diagnosis and rational treatment, as well as to the prevention of recurrence of this disease.

**Conclusions.** The tactics of treatment depend on the histological type, localization, as well as the prevalence of the tumor process. The main method of treatment of benign neoplasms of PN and SNP continues to be the surgical method. Despite all this, it is necessary to clarify and systematize new methods of treatment, the sequence of their application in order to prevent complications and relapses of the disease.

The number of patients with benign neoplasms of the nose and SNP has recently been increasing and amounts to 8-10% of all neoplasms of the head and neck (Antoniv T.V., Antoniv V.F. 2007) Benign NN and SNP are usually diagnosed late, taking for various other, usually inflammatory diseases, due to which the majority of patients (70-90%) are admitted to the clinic with an already widespread tumor process [1, 2].

Diagnosis of benign NN and SNP is carried out on the basis of anamnestic data, examination, palpation, anterior and posterior rhinoscopy, oropharyngoscopy. In addition, such diagnostic methods as X-ray examination, fibroscopy, thermography, facial angiography, radionuclide scanning, CT and MRI are widely used [1, 4]. The final diagnosis is verified by histological examination of a piece of the tumor.

Difficulties often arise in the differentiation of inflammatory and tumor processes, which leads to untimely detection of the primary neoplasm, the ways of its spread, which negatively affects the timing and usefulness of surgical interventions, often causing a relapse of the disease. The number of relapses ranges from 10% to 40%, in addition, the difficulties of diagnosis and treatment with them are much greater than with primary neoplasms, the effectiveness of treatment drops sharply (Antoniv T.V., Efimochkina K.V., Antoniv V.F., 2014). In most cases, benign neoplasms in their clinical course are often close to malignant ones, since they have destructive growth, do not always have clear boundaries, their stroma ulcerates, and ulceration leads to profuse, often recurring, life-threatening bleeding of the patient, preventing the complete removal of the tumor, which in the future leads to relapses of the disease [5,7].

Thus, the surgeon faces a difficult task: to completely remove a benign neoplasm in a patient, hemostasis, and along with an adequate functional one, a good cosmetic effect must also be achieved [2, 8, 9].

According to the International histological classification of neoplasms (WHO, No. 19), the following groups of benign NN and SNP are distinguished: benign epithelial neoplasms, soft tissue neoplasms, bone and cartilage neoplasms, mixed neoplasms and tumor-like formations. There is also a division of neoplasms into primary, arising directly in PN and SNP, and secondary, which grow into PN and SNP.

Papillomas are referred to benign epithelial neoplasms [6, 10]. In appearance, it is a grayish-whitish tumor, soft, with folds. The clinical picture develops as a result of difficulty in nasal breathing, nosebleeds, destruction of the surrounding bone tissue. In the diagnosis of papillomas, CT and MRI can be considered the method of choice [6, 7, 8]. Papillomas are usually located in the vestibule of the nose, grow relatively slowly, and often recur after removal. Considering that papilloma can degenerate into cancer, its removal should be radical. In order to prevent scarring, it is advisable to carry out cryotherapy on the wound surface after removal of the papilloma.

Adenomas are the second most common epithelial benign neoplasms. The age of patients with adenomas is usually over 40 years. Adenomas are often accompanied by nosebleeds, recur, but do not metastasize. According to V.F. Antoniva and G.U. Lutfullaev, it is difficult to carry out the criteria of differential diagnosis between benign and destructive adenomas [4, 5, 8]. The prognosis here depends on the size of the neoplasm - the larger it is, the worse the prognosis. Adenomas are treated surgically.

Vascular neoplasms include capillary and cavernous hemangiomas, as noted by previous examinations, they are more common in women. This suggests that sex hormones play a role in the genesis of vascular tumors. They grow slowly, periodically bleed, gradually increase and can fill the nasal cavity, grow into the ethmoid labyrinth, the orbit and the maxillary sinus, have the appearance of a rounded tuberous red-cyanotic tumor. With a large tumor, in order to clarify its boundaries, it is necessary to perform angiography of the carotid arteries. Surgical treatment, however, should bear in mind the possibility of massive blood loss. Relapses are possible with non-radical excision.

Osteoma is a benign tumor of SNP from bone tissue [1, 2, 3]. Most patients with osteoma have a history of trauma and inflammatory diseases of the SNP, which, according to N.K. Sanzharovskaya, is the reason for the development of this neoplasm. The favorite localization is the frontal sinus, in second place is the ethmoid labyrinth, in the third place is the maxillary sinus, in the fourth place is the sphenoid bone. Histologically, the tumor is benign, but often usurises the surrounding bones. The size of the osteomas varies from small to gigantic. The osteoma is attached with a wide or narrow leg to the bony wall from which it has grown. According to the histological structure, SNP osteomas can be compact, spongy and mixed. Mixed osteomas are the most common. Infection of the sinus as a result of obstruction of the frontal-nasal canal, as well as impaired blood and lymph circulation in the mucous membrane due to vascular compression by a tumor create conditions for the occurrence of sinusitis [5, 9]. Purulent complications caused by osteoma always prevail and determine the severity of the patient's condition. Osteoma diagnosis is based on X-ray, CT, and MRI. The traditional principles of surgery require the sanitation of purulent foci and the removal of the osteoma in the second stage [4, 8].

Chondromas develop from the remains of the premordial cartilaginous skeleton in violation of the processes of ontogenesis. As the scientific literature shows, the tumor most often occurs from the nasal septum, as well as from the bony walls of the nose - more often the ethmoid bone, less often the sphenoid and maxillary. An important feature of chondromas is that, while remaining histologically benign, they can grow into surrounding tissues, recur and even metastasize. With the spread of the neoplasm to neighboring areas, deformity of the face, exophthalmos, various visual impairments up to amaurosis, symptoms of cranial nerve damage occur. On CT, the boundaries of the spread of the neoplasm, its involvement in neighboring formations and destructive changes in the bone walls of certain anatomical formations can be established.

Angiofibroma of the nasopharynx or base of the skull is a secondary benign tumor that occurs almost exclusively in young men and young men and tends to reverse development after puberty [7]. The clinical course of juvenile angiofibromas depends on the duration of the process, the size of the neoplasm, its spread outside the nasopharynx, as well as on the associated inflammatory processes of the surrounding tissues. Primary symptoms are characterized by difficulty or absence of nasal breathing, the appearance of mucopurulent discharge from the nose and periodic nosebleeds. Secondary symptoms include chronic purulent otitis media, deformity of the face, damage to the trigeminal nerve, and visual impairment [2]. Common symptoms in the form of anemization of the body as a result of a decrease in hemoglobin and red blood cells, which arise from profuse nosebleeds. In the diagnosis of angiofibroma, preference is given to the X-ray method, CT, MRI. Treatment is exclusively surgical using various

approaches [89,129]. If there is a risk of intraoperative bleeding, the adducting vessels are ligated. Despite the improvement in the technique of surgical intervention, relapses range from 30% to 50% [6].

**Conclusions.** From the above, it follows that benign neoplasms of PN and SNP are quite common in ENT practice. Their features can be considered expansive-usurizing growth, they spread to the surrounding organs and tissues. Many of these tumors are prone to recurrence, some of them become malignant. The first and leading symptoms in patients with benign tumors of the nasal cavity and paranasal sinuses are difficulty in nasal breathing and recurrent nosebleeds. The next most common symptom is nasal discharge, indicating the presence of a chronic inflammatory process accompanying the underlying disease. Treatment tactics depend on the histological type, localization, and the prevalence of the tumor process. The main method of treatment of benign neoplasms of PN and SNP continues to be the surgical method. The use of such surgical methods of treatment as cryo- and laser surgery is becoming more widespread. Despite all of the above, it is necessary to clarify and systematize new methods of treatment, the sequence of their use in order to prevent complications and relapses of the disease.

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