

# Early Diagnosis Of Benign Tumors Of The Nasopharynx

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**Abstract:** Improving early diagnosis of nasopharyngeal tumors will allow to treat this category of patients effectively. In a large clinical material held clinical course of the data analysis and given a detailed assessment of each of the methods of diagnosis of tumors of the nasopharynx. It was concluded that the feasibility of using fiberoptic endoscopy for early detection of benign tumors of the nasopharynx.

**Keywords:** nasopharyngeal tumor, symptoms, diagnosis.

**Introduction.** The nasopharynx, as the upper part of the throat, represents a complex topographic-anatomical organ. The neoplasms arising in it are characterized by various morphological structures and histogenesis [5]. Many benign tumors, in terms of clinical course, are similar to malignant ones.

The diagnosis of benign tumors of the nasopharynx, despite the large number of diagnostic methods used for this purpose, remains a complex problem at present. Most patients seek help in specialized institutions already with advanced lesions, which is due to several reasons: the peculiarities of the clinical course, late detection of the disease, and the use of an insufficient arsenal of diagnostic methods. At the same time, the feasibility and extent of a particular surgical intervention, as the most radical form of treatment, often depend on the spread of the tumor process, and therefore, precise diagnosis of the mentioned neoplasms becomes particularly important [1,2,6].

**Materials and Methods:** A total of 142 patients with benign nasopharyngeal tumors (BNTs) were examined. The age of patients with BNTs ranged from 14 to 32 years, with a mean age of  $17.6 \pm 4.6$  years. In terms of histological structure, angiofibroma was detected in the absolute majority of cases (114-80.3%). Papilloma was identified in 17 cases (11.9%), and fibromas in 11 cases (7.8%).

At the initial, the correct diagnosis was established in 12% of patients; in other cases, diagnoses such as sinusitis, eustachitis, chronic purulent otitis media were made, and corresponding treatments were given based on these "diagnoses."

The average time from the onset of the first troubling symptoms to seeking medical help was  $5.5 \pm 1.8$  months, and to hospitalization in the ENT hospital was  $7.4 \pm 2.4$  months.

The nasopharynx is located from the vault of the pharynx to the level of the hard palate. Its anterior wall is occupied by choanae connecting it to the nasal cavity. The lateral walls of the nasopharynx are formed by the medial plates of the pterygoid processes of the sphenoid bone. The pharyngeal openings of the Eustachian tubes, connecting the nasopharynx to the middle ear, are located on these lateral walls. Anatomical and topographical features of the nasopharynx structure, the clinical symptoms of nasopharyngeal neoplasms can be conditionally divided into 2 groups (Table 1):

Group I. Symptoms similar to pathological processes in the nasal cavity and paranasal sinuses (nasal symptoms).

Group II. Symptoms characteristic of pathology of adjacent organs.

**Results and Discussion.** Analyzing the clinical symptoms, it should be noted that the earliest manifestation of the disease was a sensation of a foreign body. This symptom was reported by 78 (54.9%) patients for a certain period before seeking medical help. This symptom can be explained by mucus draining from the nasal cavity into the nasopharynx, getting stuck on even a very small tumor's rough surface, not easily detaching, creating a sensation of a foreign body in the nasopharynx (deep in the nose).

The second most frequent symptom was nasal breathing disturbance in 94 (66.1%) patients. Nasal discharge was observed in 118 (83%) patients

**Table 1**  
**Clinical symptoms of benign tumors of the nasopharynx**

Clinical symptoms	Absolute number	%
<b>I. Nasal Symptoms</b>		
Sensation of a foreign body in the nasopharynx	78	54,9
Difficulty in nasal breathing	94	66,1
Unilateral	34	23,9
Bilateral	60	42,2
Closed nasality	17	11,9
Nasal discharge	118	83
Bloody	39	27,5
Purulent	32	22,5
Serosanguineous	47	33
<b>II. Symptoms characteristic of pathology of adjacent organs</b>		
Hearing impairment	51	35,9
Unilateral	38	26,7
Bilateral	13	9,1
Tinnitus	37	26,0
Ear congestion	17	11,9
Purulent discharge from the ear	13	9,1
Serosanguineous discharge from the ear	9	6,3
Headache	77	54,2

When the pharyngeal orifice of the Eustachian tube is affected, ear symptoms such as ear ringing, stuffiness, and decreased hearing at low frequencies may occur. The anatomical location of the nasopharynx practically does not allow for a detailed examination of the mucous membrane in this area during anterior rhinoscopy, except in cases where a tumor grows into the posterior regions of the nasal cavity. Posterior rhinoscopy is designed to visually assess the state of the nasopharynx. However, it requires significant experience and skill to identify a small tumor growing close to the wall. From our observations, only 12 (8.4%) patients had a tumor detected during their initial visit to an ENT specialist using posterior rhinoscopy.

One relatively simple method for evaluating the condition of the nasopharynx that an ENT specialist can use in general healthcare settings is digital palpation. This method allows for a tactile assessment of all walls of the nasopharynx, noting the presence of any growth, its location, consistency, mobility, extent, and tendency to bleed. In a regular clinic setting, this method is simple, accessible, and informative, serving as a starting point for further investigation.

In order to visually assess the condition of the nasopharynx and the nature of the pathological process, fiberoptic nasopharyngoscopy (FNS) was used in 142 cases. The small size of the device, remote control capability, sufficient flexibility of the distal end of the endoscope during examination, and the small size of the light-conducting part allow for insertion of the fiberoptic scope through the nose and, if necessary, through the mouth (past the soft palate) to obtain a good view and illumination. Fiberoptic endoscopic examination enabled a detailed inspection of the area affected by the tumor in the nasopharynx.

In four patients who were not included in the study but had a referral diagnosis of pharyngeal neoplasm, after endoscopic examination, the diagnosis was ruled out.

Thus, in 98 patients (69%), the tumor filled the entire nasopharyngeal lumen, in 32 patients (22.5%), it occupied the dome and lateral wall with partial extension to the posterior wall, and in 12 patients (8.5%), the tumor extended from the lateral wall to the corresponding choana and soft palate.

The fiberoptic endoscopy of the nasopharynx solves a number of serious tasks:

- Identifying the presence or absence of a pathological process;
- Allowing examination of small-volume formations;
- Evaluating the growth pattern of a tumor
- Determining the initial localization of the volumetric process and its spread to various elements of the nasopharynx;
- Detecting ulcers and other parameters.

Thus, in terms of its resolving power, fiberoptic endoscopy of the nasopharynx, in our view, has no alternative and should be one of the leading methods when suspecting a neoplasm in this localization.

Radiological methods for studying nasopharyngeal tumors are widely used. CT and MRI scans, performed on 108 and 34 patients respectively, proved to be the most informative diagnostic methods for benign tumors of the nose and paranasal sinuses regardless of their histological structure and stage of development. In 14 patients, these two methods were performed simultaneously, allowing for detailed determination of the disease stage and development of a surgical plan. It should be noted that for tumors of bones and cartilaginous tissue, visualization with CT was superior to MRI. In such cases, we choose CT as the "gold standard" method.

The CT and MRI scans of the nasopharynx in the patients we observed showed their high resolution in determining the predominant side of the lesion throughout the lumen, involvement of the main sinus, extension into the infratemporal fossa, and posterior parts of the nasal cavity.

Our observations confirm the complexity of diagnosing nasopharyngeal tumors. Physicians who are first approached by patients should take measures to improve early diagnosis of nasopharyngeal tumors. Timely diagnosis should be based on strict adherence to the patient examination methodology: collecting detailed medical history and conducting thorough instrumental and radiological examinations.

**Conclusion.** Therefore, a comprehensive approach to examining patients allows for obtaining complete information about the localization, configuration, size, spread, and nature of the tumor and correctly planning treatment, selecting the optimal approach to the tumor, and determining the extent of surgical intervention:

1. The main early ENT symptoms of nasopharyngeal tumors include a sensation of a foreign body in the throat, discomfort with nasal breathing, as well as symptoms of persistent otitis media.
2. Fiberoptic endoscopy is the optimal method for detecting early forms of benign nasopharyngeal neoplasms and determining their initial growth site.
3. Among radiological methods, the capabilities of computed tomography are significantly higher compared to conventional radiographic methods, as it allows for determining not only the exophytic part of the tumor but also its endophytic spread into surrounding tissues and the base of the skull.

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