

# Nasal Pleomorphic Adenoma: A Case Report

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**Abstract:** *Objective:* Pleomorphic adenomas are the most common type of salivary gland tumors, which can involve all major and minor salivary glands including also and upper respiratory and alimentary tracts, and rarely other places. These are benign tumors with continuous and discrete growth. Without treatment the mass can reach enormous size. *Material and Methods:* We present a case of a massive pleomorphic adenoma in a 27-year-old female with a history of more than 15 years growing lesion, origin from his left nasal wing. Clinical examination showed a giant and multinodular tumour mass with soft-elastic consistency. *Results:* The tumor was completely resected by total excision and followed by macroscopically and histological examination. The histopathological conclusion was pleomorphic adenoma with negative surgical margins. *Discussion:* Pleomorphic adenomas engage most frequently the major glands but may also arise from the minor salivary glands of the sinonasal region and nasopharynx. They also may arise from within the paranasal sinuses, but frequently the paranasal cavities are involved secondary from an intranasal lesion with extension. The differential diagnosis include other benign or malignant sinonasal tumors and the main treatment modality should be surgical.

**Keywords:** pleomorphic adenoma, nasal tumor, histopathology, surgical treatment.

## 1. Objective

Pleomorphic adenomas, or known as benign mixed tumors, are the most common neoplasms of the salivary glands. The majority of salivary gland tumors, constitute about 3% of all neoplasm tumors, are benign and about 70% are pleomorphic adenomas.

Benign salivary gland tumors occur rarely the sinonasal region and nasopharynx. They occur most often the nasal cavity and rarely the paranasal sinuses. Pleomorphic adenoma (benign mixed tumor) is the dominant seen histologic type, less often monomorphic adenomas such as myoepithelioma and oncocytoma occur [1]. This is a heterogeneous mixture of epithelial and myoepithelial cells, mixed with tissues of myxoid, chondroid or mucoid origin, commonly found in salivary glands [2].

These tumors appear as polypoid or exophytic growths, usually covered by an intact mucosa, and different size. They are relatively circumscribed without invasive growth, in contrast to malignant tumors. There is a tendency for pleomorphic adenomas of the nasal cavity to be cellular, showing a predominant myoepithelial component [1,3].



Figure 1



Figure 2

## 2. Material and Methods

A twenty-seven years old female, presented to the Otorhinolaryngology Department in University Hospital, St. Zagora, in March 2014, complaining of a tumour mass located on his external nose, with about fifteen years history. It begins from the left nasal wing (Fig.1,2). Clinical examination showed a giant (with dimensions 5/4 sm) and multinodular tumour mass with soft-elastic consistency. Without a history of pain, bleeding or nasal breathing disturbances. The main cause to seek medical attention are estetic and present of feeding difficulties. In anterior rhinoscopy there are not found any abnormalities. The rest of the ear, nose, and throat examination was normal and there was no evidence of cervical lymphadenopathy. Blood count was also reference ranges.



Figure 2

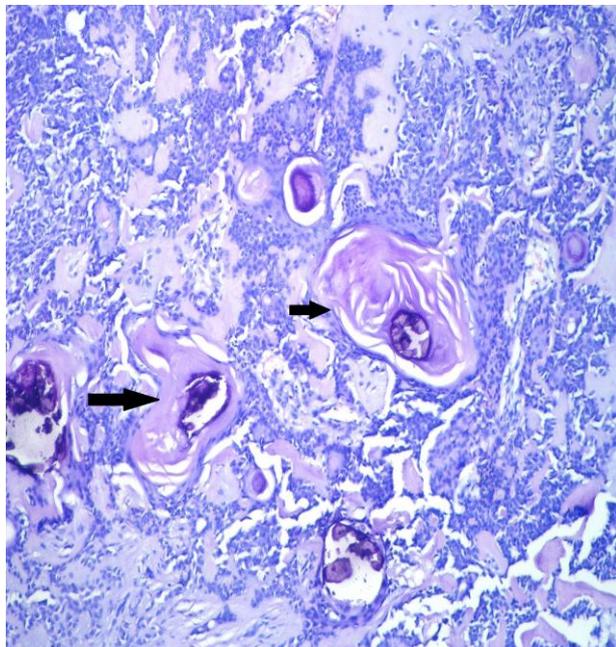


Figure 4

### 3. Results

Under general anesthesia, it was performed cold and monopolar electrocautery complete excision with a few millimetres of the surrounding normal tissue, followed by histomorphological analysis in clinical pathology department of our hospital. Macroscopically, the removed mass appear as heterogeneous compact structure with zones of cystic formations (Fig.3). Microscopically the tumor was composed of mixture of calcified ductal and tubular formations (Fig.4) and spindle myoepithelial cells (Fig.5) into chondromyxoid stroma (Fig.6). There were not found areas of malignant transformation. The histopathological conclusion was pleomorphic adenoma with negative surgical margins.

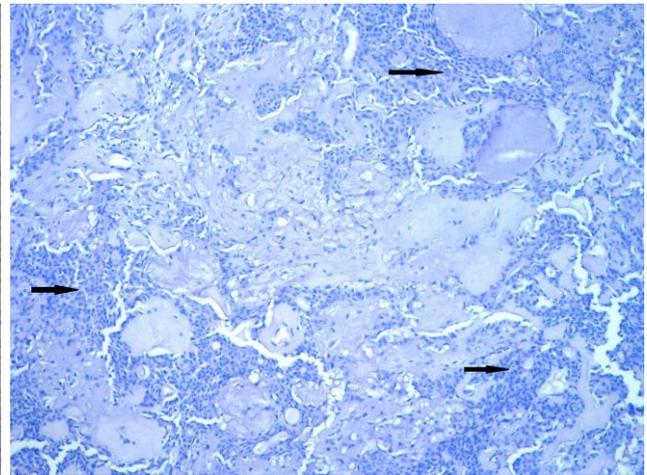


Figure 5

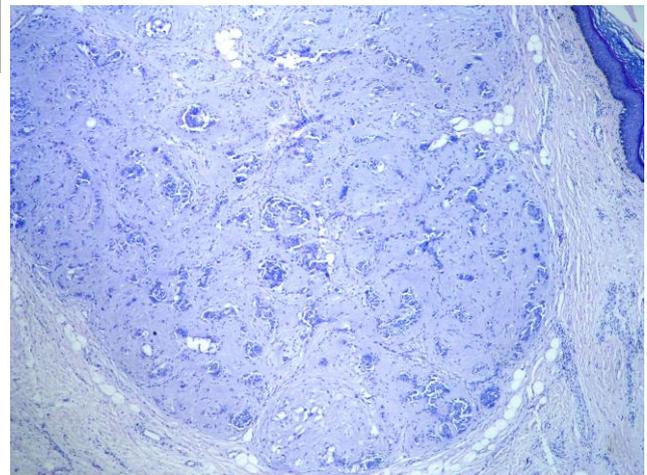


Figure 6

### 4. Discussion

Nowadays most agree that pleomorphic adenoma originate from an uncommitted reserve cell of the intercalated duct that has the potential to differentiate into epithelial and myoepithelial cells. This tumor engage most frequently the major salivary glands but may also arise from the minor salivary glands of the upper respiratory and alimentary tracts, and rarely other places. Adenomas of the minor salivary glands most commonly occur in the soft and hard palate region [3].

The second most common site is the upper lip. In contrast, pleomorphic adenomas are extremely rare in the lower lip, despite the abundance of minor salivary glands in this location. These are the most common benign tumors of the lacrimal gland [4].

Nasal pleomorphic adenomas tend to originate along the bony or cartilaginous part of the nasal septum, more than any other site. Although these tumors may arise from within the paranasal sinus, but frequently the paranasal cavities are involved secondary from an intranasal lesion with extension [1-3]. They are seen most common in females than males and usually between the 30 and 50 years old [5]. The mean age of presentation is 36.6 years [6].

In histological examination, adenomas are composed of epithelial components in form of nests, ducts or solid sheets of cells and myoepithelial cells that appear plasmacytoid or spindled in a fibrocollagenous, myxochondroid, or chondroid background. There are some variations in the histologic appearance of this tumor type. They are common and may include lipomatous or osseous changes, squamous metaplasia, calcification, cartilage-appearing tissue, oxyphilic cells, and a palisading appearance of the underlying stroma [1,2,6,7].

Pleomorphic adenomas are round and solitary tumors. The cut surface is solid and hard or soft in consistency with a whitish gray to pale yellow color. Pleomorphic adenomas of the major salivary glands have a capsule. In contrast of this the minor salivary glands masses are usually nonencapsulated.

Clinical manifestation is present with nasal obstruction, affected left or right side of the nasal cavity, sometimes epistaxis or anosmia. They appear after a long silent period. In neglected cases it may appear and pain symptoms, dictated by tumour extension and compression of surrounding structures [8,9].

The main treatment should be surgical. Complete excision of the tumour with histologically clear margins is obligatory. A radical and wide resection reduce the risk of recurrence, especially when the tumour capsule is impaired and a contact with the normal surrounding tissue is present [10].

Malignant transformation of pleomorphic adenoma is rare and occurs most frequently in patients with long-standing tumors. The risk of malignant transformation in pleomorphic adenoma is 1.5% within the first 5 years of diagnosis but increases to 10% if observed for more than 15 years [11].

Cases of benign pleomorphic adenoma metastasizing to cervical lymph nodes have been described [12]. But nasal cavity may also be a metastatic destination of major salivary gland pleomorphic adenoma [13]. The differential diagnosis of these tumors include other benign or malignant tumors, such as nasal polyposis, inverted papilloma, squamous cell carcinoma, adenocarcinoma, esthesioneuroblastoma, sinonasal melanoma, juvenile nasopharyngeal angiofibroma etc.

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