

Nasopharyngeal papilloma- A rare case report



Medical Science

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ABSTRACT

Papilloma—a benign epithelial neoplasm of respiratory mucosa which is most commonly reported in nasal cavity and paranasal sinuses, rare in the nasopharynx. To the best of our knowledge, very few cases have been reported in English literature. We report a case in a 38-year-old lady who presented with features of nasal obstruction, nasal stuffiness and headache and was diagnosed histologically as nasopharyngeal papilloma. The post-operative course was uneventful.

INTRODUCTION

Squamous papilloma is a benign epithelial tumor that can develop in any mucosal site of the upper aerodigestive tract. While this tumor is found mainly in the squamociliary junction, its distribution does not occur randomly.

Papilloma, benign neoplasms of the respiratory mucosa. Typically found in the nasal cavity and paranasal sinuses, rare in the nasopharynx. A review of the literature confirms that this kind of neoplasm is extremely rare in the nasopharynx and not many cases are described in the literature so far. The present case highlights the diagnostic histopathological features of the tumor.

CASE REPORT

A 38-year-old female presented with 3 week old history of nasal obstruction, nasal stuffiness and headache to outpatient clinic. The patient was suffering from similar complaints since past 3-4 yrs which was not subsiding by medication.

On diagnostic endoscopy, there was a polypoidal fleshy, pink mass in the nasopharynx [Figure 1]. Investigation revealed a soft, nodular lesion obstructing the pharyngeal opening of the right eustachian tube. On CT scan polypoidal mass in the nasopharynx showed airbubbles in between solid areas. This mass was seen hanging behind the soft palate. The mass was excised through trans- nasal route. Post-operative follow up was uneventful.

Specimen was sent to histopathological examination. On gross examination, the tumor was polypoidal in nature and was gray white in appearance measuring 3x3 cm, representative area was processed. Microscopy showed fragments of tissue lined by pseudostratified columnar epithelium, pseudostratified ciliated columnar epithelium and focal area by cylindrical epithelium. Subepithelium showed proliferation of lymphocytes and plasma cells. No evidence of mitotic figures seen in section studied [Figure 2]. Final diagnosis of nasopharyngeal papilloma was made.

Post-operative course was uneventful. Patient had no complaints on follow-up after a month and endoscopy revealed no signs of recurrence.



Fig 1: Endoscopy showing polypoidal fleshy pink mass in the nasopharynx

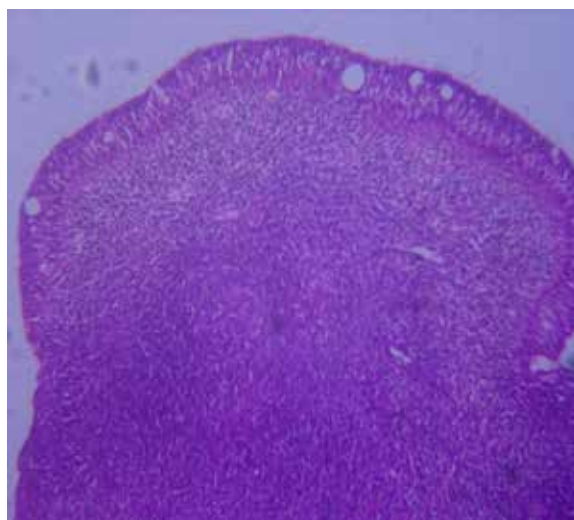


Fig 2: Microscopy showing papillae lined by pseudostratified ciliated columnar epithelium

DISCUSSION

The pharynx is a tubular structure extending from the base of the skull superiorly to the esophageal inlet inferiorly. It is composed of three distinct areas: nasopharynx, oropharynx, and hypopharynx. The ectodermally derived epithelium which lines the nasal pits forms the schneiderian membrane. The resulting bucconasal membrane, consisting of a layer each of ectoderm and endoderm, separates the two compartments. This structure eventually breaks down, allowing for communication between the two cavities. By 10 weeks, the growth of the lateral palatal shelves separates the nasal and oral compartments, and the developing septum divides the nasal cavity into right and left halves. This process occasionally results in the migration or incorporation of schneiderian membrane into areas where it is not normally found. Subsequent inflammation of this tissue—either by environmental, viral, or other agents—can result in the development of a papilloma¹.

In 1971, Hyams in his large clinicopathological series from Arm Force Institutes of Pathology was the first one who subclassified sinonasal papillomas into three subtypes: cylindrical, fungiform and inverted papillomas.²

Krouse staged IP involving the nose and paranasal sinuses into four stages : T1- The disease is limited to the nasal cavity alone. T2- The disease is limited to ethmoid sinuses and medial and superior portions of maxillary sinuses. T3- The disease involves the lateral or inferior aspects of maxillary sinus or extension into frontal or sphenoid sinuses. T4- This stage involves tumor spread outside the confines of nose and sinuses. This stage also includes malignancy.³

Benign tumors of nasopharynx are very rare. Out of these various benign tumors nasopharyngeal papilloma is considered to be extremely rare as there are very less cases reported so far. Most commonly papillomas are seen in nasal cavity and paranasal sinuses; rare in the nasopharynx. It affects the nasal mucous membrane and is composed of tall columnar-shaped cells, mucous cells, which have small hairlike structures called cilia. To the best of our knowledge, very few cases of nasopharyngeal papilloma are reported in English literature.

Sinonasal papillomas are the disease of viral etiology characterized by recurrent proliferation of benign papilloma anywhere in the respiratory tract from nasal vestibule to bronchi. Papillomas are most commonly seen in men (male to female ratio 2:1), occasionally in children. Typically affects patients of age group 30 to 50 years. The present case was reported in female patient aged 38 years. Clinically, symptoms vary in duration from months to years; typically, they include nasal obstruction or epistaxis. In our case also the patient presented for 3-4 years with complaints of nasal obstruction⁴.

There are various types of sinonasal papilloma which includes inverted, cylindrical cell, transitional cell, squamous cell and Schneiderian. In majority of cases sinonasal papillomas are unilateral in nature. Microscopically these are composed of proliferating columnar or squamous epithelial cells with mucin cells and numerous microcysts. Some tumors show granular eosinophilic cells with features of oncocytes. The papillomas arising in the nasal septum are usually exophytic and mushroom shaped with a thin central core of connective tissue. Those located in the lateral wall are of inverted type with inward growth of the epithelium into the stroma. Sinonasal papillomas have a tendency to recur especially inverted type. The potential for malignant transformation is seen in all subtypes of papilloma. Many studies have been done in recent years with insitu hybridization or polymerase chain reaction techniques demonstrating the presence of human papilloma virus. HPV 6/11 has been detected in majority of papillomas. The treatment of these papillomas is surgical excision^{5,6}.

Nasopharyngeal papillomas can be difficult to excise. Access and visualization make excision difficult, increasing the risk for recurrence. But in this case the patient was followed up and there was no recurrence. These lesions have a high rate of recurrence or malignant degeneration. But in this case patient had no recurrence of the tumor within a period of 5 months.

CONCLUSION

The present case study described a rare papilloma arising from the nasopharynx of a thirty eight year old woman who was managed with minimal invasive endoscopic surgery and she had remained free of recurrence till now. Nasopharyngeal papilloma is a very infrequent neoplasm and should be kept in the mind of histopathologist while evaluating the tumors of upper respiratory tract. A conservative endoscopic approach could be used in the management of nasopharyngeal papilloma with a favorable outcome.

REFERENCE

1. Low WK, Toh ST, Lim CM, Ramesh G. Schneiderian papilloma of the nasopharynx. *Ear Nose Throat J.* 2002 May;81(5):336-8. | 2. Shafik N. Wassef, Pete S. Batra, and Samuel Barnett. Skull Base Inverted Papilloma: A Comprehensive Review. *International Scholarly Research Network ISRN Surgery* 2012, 1-34. | 3. Krouse JH. Development of a Staging System for Inverted Papilloma. *Laryngoscope* 2000; 110(6): 965-8. | 4. Hyams, V. J. "Papillomas of the nasal cavity and paranasal sinuses. A clinicopathological study of 315 cases." *Ann Otol Rhinol Laryngol* 80(2): 192-206. | 5. Darwish A, Al-Abdullah A. Cylindrical Cell Papilloma (Oncocytic Schneiderian Papilloma); Clinicopathological Study of Five Cases. *Oman Med J* 2012 Sept; 27(5). | 6. Carol Dsouza, Mah-e-Jabeen, Pushpalatha K. Pai . Human papilloma virus detection by immunohistochemistry on sinonasal papillomas and nasopharyngeal carcinomas: Report on 26 cases. *Archives of Medicine and Health Sciences.* Jan-Jun 2013 . Vol 1. Issue 1. | 5. Darwish A, Al-Abdullah A. Cylindrical Cell Papilloma (Oncocytic Schneiderian Papilloma); Clinicopathological Study of Five Cases. *Oman Med J* 2012 Sept; 27(5). |