

Inverted Papilloma: A Case Report

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Inverted papilloma is a rare benign tumor of nasal cavity and paranasal sinuses. Although it is included in category of benign tumors, it has strong potential for local destruction, high recurrence rate and increased tendency towards malignancy. In this report, we present a case of an uncommon bilateral inverted papilloma of nasal cavities and paranasal sinuses.

KEY WORDS: Inverted papilloma, paranasal sinuses, local destruction.

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INTRODUCTION

Inverted papilloma is a benign sinonasal epithelial tumor categorized under sinonasal schneiderian papilloma. According to World Health Organization (WHO) 2005 classification, Schneiderian papilloma comprises inverted, oncocytic and exophytic papilloma.¹ In 1854, Ward first described the inverted papilloma in the sinonasal cavity.²

Inverted papilloma arises from lateral wall of nasal cavity and it secondarily involves the maxillary, ethmoidal, frontal and sphenoidal sinuses. It is extremely rare for paranasal sinuses to be primarily involved, occurring only in 5% of the cases.³

It has three main characteristics that distinguish it from other benign sinonasal tumors, locally aggressive growth pattern, high rates of recurrence and increased tendency toward malignancy.⁴ 10%-15% of the cases of the nasal cavity and paranasal sinuses are associated with squamous cell carcinoma.⁵

Inverted papilloma is 4 to 5 times more frequent in males in the 5th to 6th decade of life. Signs and symptoms are nonspecific, may include unilateral nasal obstruction which may cause pain, epistaxis, purulent discharge, olfactory disorders and recurrent rhinosinusitis.⁶ The pathogenesis of Inverted papilloma is unclear although allergy, chronic sinusitis and viral infections have been suggested as possible etiologic factors.

CASE REPORT

A 42 years old male presented to the department of Oral and Maxillofacial Surgery, Mayo Hospital Lahore on September, 2017 with left side swelling of the face and associated proptosis of the ipsilateral eye, for one year. Initially, there was only complaint of intermittent nasal obstruction and nasal discharge. After some time, a small nasal mass with associated facial swelling has been felt by the patient. Both nasal mass and facial swelling increased in size gradually. Eventually over a period of one year, left eye proptosis was also remarkable. Past medical and surgical histories were not significant. Clinically, there was a huge swelling on the left side of the face, extending cephalocaudally from the left supraorbital rim to the left angle of the mouth and mediolaterally from the left lateral nose to the left malar region, along with marked proptosis of the left eye that displacing the eyeball (Fig. 1). Swelling was soft to firm and non-tender on palpation. Overlying skin was intact in texture and temperature, but slight reddish in color. There was polypoid mass in the nose bilaterally, causing nasal obstruction. Mouth opening was normal. Intraorally, swelling also involved the hard palate bilaterally up to the junction of hard and soft palate, firm and non-tender with normal overlying mucosa.



Fig 1

CT scan revealed a soft tissue hypodense mass in bilateral nasal cavities extending into the bilateral ethmoidal, frontal and maxillary sinuses. Superiorly, mass had intracranial, extra axial extensions. Laterally mass was

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extending into the left orbital cavity, posteriorly into the nasopharynx and inferiorly it is eroding the hard palate (Fig. 2). Incisional biopsy was inconclusive showing benign inflammatory lesion.

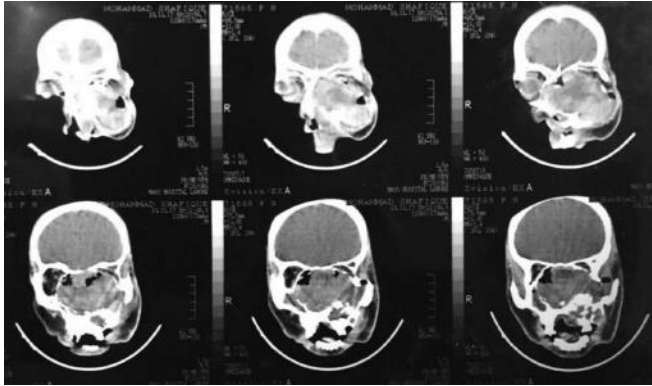


Fig 2

Surgical excision under GA was planned. Lateral rhinotomy incision with infraorbital extension was used and mass was excised from the nasal cavities, sphenoidal, ethmoidal and bilateral maxillary sinuses (Fig. 3). Excisional biopsy was sent for histopathological examination. Histological examination revealed polypoidal tissue lined by columnar cells with an admixture of mucin containing cells. Tissue enclosed in basement membrane which grows endophytically into the underlying stroma. Clinicohistopathologic correlation was suggestive of final diagnosis of Inverted papilloma.



Fig 3

DISCUSSION

The inverted papilloma also called Ringertz tumor, transitional cell papilloma, schneiderian cell papilloma, epithelial papilloma, is a group of benign neoplasm originating from the sinonasal mucosa. The name inverted is derived from the pattern of endophilic growth of the superficial epithelium to inside the adjacent stroma. Typically, the schneiderian papillomas are unilateral, bilateral papillomas may also occur.² Inverted papillomas are generally diagnosed at a late stage, 1-4 years after first onset of sinonasal symptoms. Functional signs and symptoms are nonspecific and vary according to the site of occurrence; they include nasal obstruction, anterior and/or posterior rhinorrhea, epistaxis, hyposmia or anosmia, symptomatic mass or facial pain. On clinical examination by endoscopic exploration of the nasal cavities, there is a reddish-gray lobulated tumor, firmer than an inflammatory

polyp with a characteristic "raspberry" aspect. Inverted papillomas are friable on palpation and bleed on contact.¹

Etiology is undefined, the possible etiologies are inflammatory origin and chronic infectious rhinosinusitis, allergies, Epstein-Barr virus and Human Papilloma virus.³

Pathologic examination is essential for diagnosis. Histologically inverted papillomas have an endophytic growth pattern consisting of invagination of the superficial IP epithelium into the underlying connective tissue stroma. The epithelium may be of squamous, transitional or respiratory type. The basal membrane is intact.² Radiological assessment done with CT scan and MRI scan being the most common. Sinus CT is systematic. On CT scan, the aspect of IP is nonspecific with an isodense unilateral homogeneous lesion mostly centered on the middle meatus of nose. Micro calcifications are found within the lesion in about 20% of cases. Bone erosions are frequently found. MRI is first imaging modality to perform for follow-up cases.¹

Inverted papilloma is a benign neoplasm having association with squamous cell carcinoma. This association with malignancy, along with greater invasion potential and tendency for recurrence suggests the treatment paradigm for IP. Complete surgical excision including the adjacent uninvolved mucosa is the treatment of choice. Endonasal endoscopic approaches are used only for tumors of limited extensions while an external or combined external/endoscopic approach remains the treatment of choice for most of the lesions.⁴ Tumor recurrence usually occur in the first two years, but in some cases it occurs after 6 years of evolution so patient follow up for at least 6 years should be done.²

DISCLAIMER

The manuscript has not been published and is not under consideration for publication in any other journal.

CONFLICT OF INTEREST

We have no conflict of interests to declare.

FUNDING SOURCES

We have no funding sources to declare.

This case report is being published after taking consent from the patient.

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