

A Rare Case of Inverted Papilloma Arising From Middle Turbinate

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Abstract

Case Report

Inverted papilloma is a rare benign tumour of nasal cavity and paranasal sinuses. Although it is included in class of benign tumour, it has strong potential for destruction and has a tendency to recur with incomplete resection. It has ability for malignant transformation to squamous cell carcinoma. Here we present a case of an inverted papilloma originating in a rare location i.e. middle turbinate. This report has the objective of emphasizing on the need for debulking of the tumour intraoperatively and then decide on appropriate approach.

Keywords: Inverted papilloma, benign nasal mass, Sinonasal papilloma.

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INTRODUCTION

Inverted papilloma is a benign epithelial growth extending into the underlying stroma of the nasal cavity and paranasal sinuses. The tumour is well known for its invasiveness, tendency to recur and association with malignancy (squamous cell carcinoma). It is a rare benign tumour with incidence rate of 0.6 cases/100,000 people/year. [1] It usually arises from the lateral nasal wall, in the middle meatus, often extending to the ethmoid and maxillary sinuses. In advanced cases, extension into the ipsilateral structures and peripheral nervous system may occur whereas intracranial growth and dural penetration are rare [2]. The pathogenesis of this lesion remains unclear although allergy, chronic sinusitis and viral infections have been suggested as possible causes [3].

CASE REPORT

A 21 years old male patient presented to the ENT OPD with complaint of right sided nasal obstruction for 8 months. He also noticed a mass in right nasal cavity associated with watery nasal discharge, post nasal discharge. Patient also complained of intermittent bleeding from nose.

On examination of nose, pinkish mass with irregular surface was seen coming out of right nasal cavity (Fig-1). This mass was sensitive to touch and minor bleeding was noticed on attempt at probing.



Fig-1: Pinkish mass with irregular surface seen coming out of right nasal cavity

Diagnostic nasal endoscopy showed a large papillomatous mass obstructing the right nasal cavity completely till vestibule anteriorly, so endoscope could not be pass beyond it. Left nasal cavity was found to be free from any lesions.

Differential diagnosis in this case included inverted papilloma, nasal polyp with inflammation, malignancy of nasal cavity. Contrast enhanced computed tomography of the para nasal sinuses showed (Fig-2) ill-defined heterogeneously enhancing soft tissue mass occupying the right nasal cavity and abutting the middle turbinate with extensions and

compromise of right osteo meatal unit and right frontal sinus drainage pathway. There was no evidence of bony erosions and calcifications. Biopsy revealed growth lined by stratified squamous columnar epithelium, at places lined by respiratory type of epithelium. Focal areas in epithelium showed ulceration and granulation tissue and at places oncocytic changes. The findings were suggestive of inverted papilloma with focal ulceration.

Final diagnosis of inverted papilloma of nasal cavity was made. Origin of the lesion was not clear from the scan so it was decided to approach this lesion endoscopically to identify the origin. It was also decided to perform endoscopic medial maxillectomy only if tumor was found to be involving significant area of medial maxillary wall.

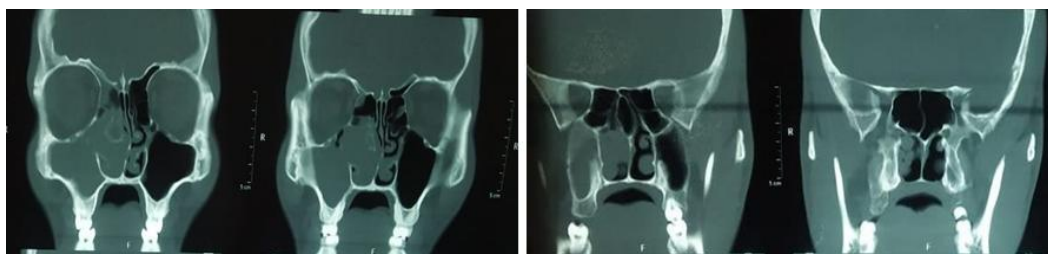


Fig-2: contrast enhanced CT scan showing ill-defined heterogeneously enhancing soft tissue mass occupying the right nasal cavity.

Patient underwent surgery under general anesthesia. After decongestion of right nasal cavity, tumor was found to be completely filling the anterior portion of the nasal cavity and origin could not be identified. Tumor was debulked using a microdebrider taking care not to injure normal structures of lateral nasal wall (Fig-3). Gentle debulking of the tumor revealed its origin from anterior part of middle turbinate with a broad base. There was no attachment of the tumor to lateral nasal wall. It was decided to completely excise the middle turbinate and was performed using endoscopic scissor taking care not to injure the area of cribriform plate superiorly. Uncinectomy, maxillary antrostomy and anterior ethmoidectomy was performed to reestablish the ventilation of middle meatus and related sinuses. After assuring complete hemostasis nose was packed and specimen was sent for final histopathological examination.

Histopathological examination of excised specimen showed strips of tissue lined by transitional epithelium. Epithelium showed inward proliferation of epithelial cells. Stroma showed mixed inflammatory infiltrate comprising of eosinophils, neutrophils, lymphocytes and plasma cells. Features were consistent with inverted papilloma. The patients post-operative recovery was uneventful. His condition was stable after the operation, with relieving of nasal obstruction. Significant crusting was noted during first follow-up after a week which was cleared endoscopically (Fig-4). Subsequent follow up visits for six months showed no evidence of tumour recurrence.

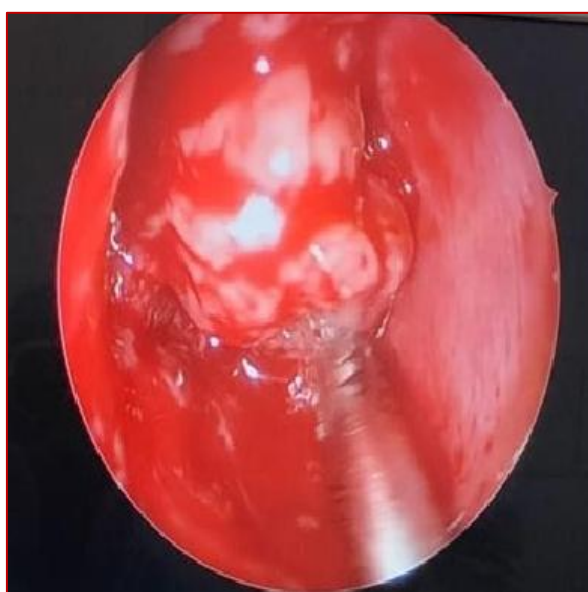


Fig-3: Endoscopic image showing debulking of tumour

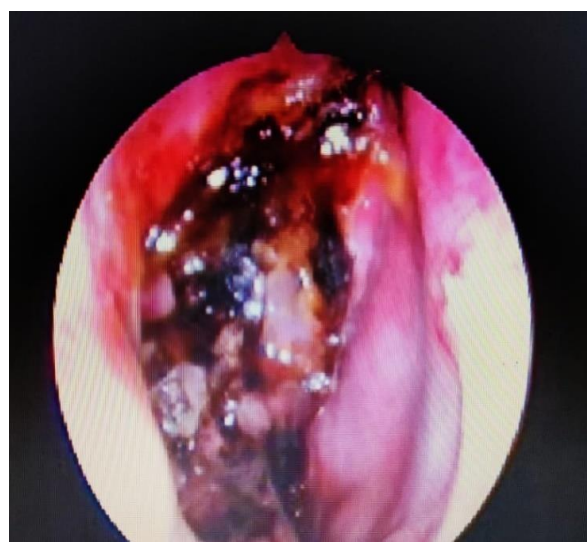


Fig-4: Postoperative image after a week showing crusting

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. It is a rare tumor comprising 0.5–4% of all primary nasal tumours. [4] It is 4-5 times more frequent in males in 5th-6th decade of life.

Functional signs and symptoms are nonspecific and vary according to the site of occurrence; they include nasal obstruction, anterior and/or posterior rhinorrhoea, epistaxis, hyposmia or anosmia, symptomatic mass or facial pain. In our case, patient presented with watery nasal discharge, post nasal discharge, nasal bleeding on cleaning his nose with pressure or force. On clinical and endoscopic examination of nasal cavities, there was a large pinkish mass obstructing the right nasal cavity completely till the nasal vestibule.

Etiology of inverted papilloma is undefined, the possible etiologies are inflammatory origin and chronic infectious rhinosinusitis, allergies, Epstein-Barr virus and Human Papilloma virus [5].

Complete surgical excision including the adjacent uninvolved mucosa is the treatment of choice. Endonasal endoscopic approaches are used only for tumours of limited extensions while an external or combined external/endoscopic or fully endoscopic medial maxillectomy remains the treatment of choice for most of the lesions involving significant area of medial maxillary wall [6]. It is rare to find inverted papilloma arising from other areas of nasal cavity such as medial orbital wall, frontal recess/Sinus, sphenoethmoidal recess and middle turbinate. Generalization of radical surgical procedures such as medial maxillectomy for all the biopsy proven inverted papillomas can lead to significant unnecessary morbidity in group of patients in whom tumor arises from areas other than medial maxillary wall. Many patients with origin of tumor in the medial maxillary wall with small base can be managed with limited excision of medial maxilla avoiding complete medial maxillectomy. For this reason, surgical treatment of proven/suspected inverted papilloma need to be tailored depending on site and extent of its attachment. Initial debulking of tumor with a microdebrider is an important step to decide about the extent of surgery to be performed for complete clearance of the tumor.

The usual cause of recurrence is, however, incomplete surgical excision. Tumour recurrence usually occur in the first two years, but in some cases, it can occur after 5-6years, so patient should be followed up for at least 5 years [8]. Our case showed no evidence of recurrence till date with 6 months of follow-up.

CONCLUSION

Diagnosis of benign tumors such as inverted papilloma and pre-operative identification of site and extent of its attachment may be difficult. The first concern should be to exclude malignant neoplasm, for which multiple biopsies may be required. Identification of the origin of an inverted papilloma is essential for the complete extirpation of such tumours. In the present case, the inverted papilloma arose from the middle turbinate. We attempted to highlight that not all inverted papilloma's showing involvement of maxillary sinus and medial maxillary wall on CT scan needs aggressive /radical surgeries. In present case, with Transnasal approach using endoscope was done and nasal mass was removed without any need for extensive removal of tissues of nasal wall.

Surgeon should always keep in mind to look for the origin of the tumour and debulking of the tumour on table and then decide the approach and not to straight away go for aggressive/radical surgeries.

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