



A CASE OF INVERTED PAPILLOMA

KEY WORDS: inverted papilloma, Paranasal sinuses, Nasal Polyp

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ABSTRACT

Inverted Papilloma are rare, benign but locally aggressive tumors arising from mucosa of nasal cavity and paranasal sinuses. They are known for recurrences and are associated with malignancy. We report management of such a case at our tertiary hospital. The patient presented with left side nasal blockage without any other complaints. On endoscopy, the whole nasal cavity was found to be occluded by a polypoidal mass similar to an antrochoanal polyp. The CT scan however suggested an inverted papilloma with turbinate destruction. The patient was planned for an aggressive functional endoscopic sinus surgery with bone drilling to extirpate the disease. Through this paper, we want to highlight the importance of differentiating inverted papilloma from benign nasal growth like antrochoanal polyp and its complete removal to avoid recurrence.

INTRODUCTION

Inverted papilloma is a benign Sino-nasal neoplasm characterized by unilateral nasal mass and obstruction, epiphora, anosmia and sometimes epistaxis.^[1] Although benign it is known to spread locally, cause recurrences and is associated with squamous cell carcinoma.^[2] HPV 11, 16 and 18 have been associated with its pathogenesis.^[4]

The commonest site for origin of ethmoidal region (48%) followed by lateral nasal wall and maxillary sinus (28%) and frontal sinus (2.5%).^[3] Histologically, the tumor has its epithelium inverting into stroma with distinct basement membranes and is used to confirm the diagnosis preoperatively. CT scan and MRI are important for diagnosis. CT is the main modality and is useful in looking for papilloma origin and planning for surgery. MRI is useful in distinguishing papilloma from mucus.^[3]

Treatment is essentially surgical and involves complete resection of papilloma to prevent recurrence. Traditionally, more aggressive open approaches were used earlier but recently, these are being managed endoscopically which includes modified Lothrop procedure (MELP), Draf type II approach and Osteoplastic flap.^{[5] [6] [7] [8][9]} The patient is followed up regularly at least for a 3-year period to look for recurrences and malignant transformation.

Case Study

A 56-year-old female patient presented with chief complaints of left side nose blockage and protruding mass in left nostril for 1 year. She had no complaint of recurrent sneezing, nasal discharge, nose bleed or pain. On anterior rhinoscopy, a polypoidal pinkish protruding mass was noted in the left nostril, on probing it was attached to the lateral wall and did not bleed on touch. Rest of the ENT examination was normal.

The patient underwent a contrast enhanced CT of paranasal sinuses which was suggestive of inverted papilloma in the entire left nasal cavity with erosion of inferior and middle turbinate with mild mucosal thickening in left maxillary sinus without any other bony erosion. There was no intra orbital or intracranial extension.

She was given a three-day course of antibiotics and steroids after which left FESS was planned. There was no decrease in size as seen in nasal polyps.

Intra operatively, after removal of most of the papilloma from nasal cavity, it was found to arise from frontonasal process of maxilla and lacrimal bone and also involved the posterior end

of middle turbinate and inferior turbinate. Left maxillary antrostomy was done and within maxilla, only mucoid discharge was present with no extension of papilloma. Posterior part of the middle turbinate was involved and therefore removed.

The frontal and anterior and ethmoidal sinuses were opened and cleared to prevent recurrence. The parts of inferior and middle turbinate were removed. Lastly, the frontonasal process and lacrimal bone was drilled up to periosteum to achieve clearance. Anterior nasal packing was done.

The pack was removed 2 days postoperatively and the patient was discharged on antibiotics, drops and daily nasal douching. Histopathology was suggestive of inverted papilloma.



Figure 1. inverted nasal papilloma as seen on anterior rhinoscopy

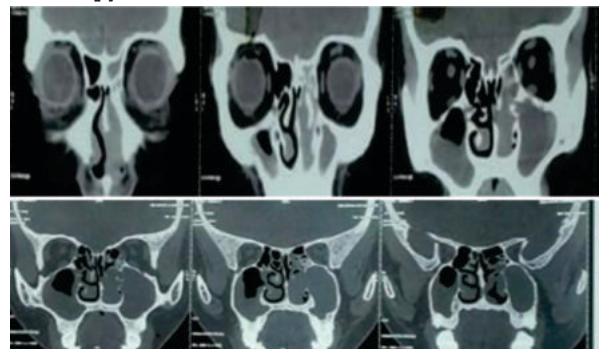
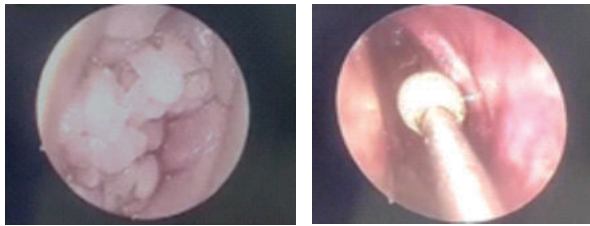


Figure 2: contrast enhanced CT showing left nasal cavity occluded by papilloma, left maxillary sinus with inspissated secretions and blocked left frontoethmoidal and sphenothmoidal recesses.



(a) **(b)**
Figure 3: intraoperative images of (a). the papilloma; being removed (b) drill work being done over left lacrimal bone, which was the origin of papilloma

The patient was examined 7 days postoperatively. The mucosa was healthy and all the sinuses were clear. There was no evidence of residual polyp.

The patient was kept on monthly follow up to look for any recurrence.

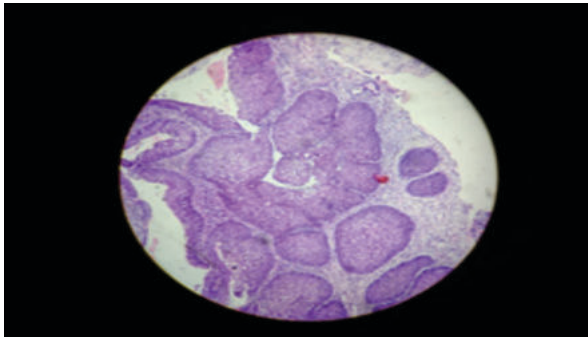


Figure 4. Hematoxylin and eosin sections of inverted papilloma. Downward growth of round to elongated interconnected epithelial cell nests with hyperplastic epithelium, transmigrating neutrophils and micro abscess.

DISCUSSION

Inverted papilloma also called Ringertz tumor and transitional cell papilloma comprises 0.5- 4% of all primary nasal tumors.^[11] It is composed of squamous or columnar epithelial proliferation growing downward into the underlying connective tissue stroma.^[2] They are usually unilateral and lead to nasal obstruction and sometimes epistaxis. The viral etiology by HPV is considered to be associated with development of inverted papilloma.^[4]

CT scan and MRI scan are used commonly to evaluate the extension of the tumor which usually arises from the lateral wall of the nasal bone. There are bony remodeling changes seen in CT scan and In MRI there is convoluted cerebriform appearance seen.^[3] MRI is helpful in follow up after removal of the polyp.

Recurrence is commonly associated with this tumor therefore complete resection is important to minimize recurrence. It is important to remove the underlying mucoperiosteum in the area from which the tumor originates; this can be done by a drill.^[11] This is done as there is a tendency of invasion of surrounding bones and its haversian canals.

CONCLUSION

Inverted papilloma comprises only 0.5-4% of all nasal tumors and presents with unilateral mass in the nose leading to nasal obstruction and at times associated epistaxis.[10] Surgical management is the modality of treatment in which the approach can be decided by the extent of the tumor in radiological investigations. Complete resection with removal of the mucoperiosteum from where the tumor arises is necessary to prevent recurrence.^[12]

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