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Case Report

An unusual presentation of inverted papilloma in the nasopharynx

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ABSTRACT

Inverted papilloma is a benign epithelial ingrowth into the underlying stroma of the nasal cavity and paranasal sinuses. Even though inverted papilloma is a common lesion within the nasal cavity, it rarely presents primarily in the nasopharynx. This patient presented with clinical features of a nasopharyngeal mass, which on imaging of nose and paranasal sinuses revealed a well-defined polypoidal soft tissue density lesion seen arising from the posterolateral wall of nasopharynx. Total surgical excision of the mass was done and histopathological examination was indicative of inverted papilloma with features suggestive of carcinoma in situ. The importance of early identification of this lesion lies in the fact that the tumor is well known for its invasiveness, tendency to recur and association with malignancy. Hence this requires close surveillance and regular follow up with endoscopy and imaging. This case is rare of its type due to its unusual presentation as an isolated nasopharyngeal mass without extension to nasal cavity.

Keywords: Inverted papilloma, Nasopharynx, Sinonasal papilloma

INTRODUCTION

The inverted papilloma is a rare benign, but locally aggressive tumor of the nose and paranasal sinuses which arises from the Schneiderian membrane of the nasal cavity. This most commonly affects individuals, most commonly men, in their fifth to seventh decades of life.[1] It constitutes only a small percentage of all nasal tumours, ranging from 0.5% to 4%. The lesion was first described by Ward more than a century ago, later the tumor was more specifically characterized by Ringertz et al in 1938 as one with a propensity for local invasion of the surrounding tissues and for recurrence.[2]

Inverted papillomas most commonly originate from the lateral wall of the nasal cavity, and it secondarily affects the maxillary, ethmoidal, frontal and sphenoid sinuses. The primary site of involvement as the paranasal sinuses is extremely rare, happening only in 5% of all the cases.[3] However, Inverted papilloma is not usually seen primarily in the nasopharynx. Acevedo-Henao et al reported an incidence of only 3% involving the nasopharynx.[4]

CASE REPORT

A 61-year-old male patient presented to our ENT outpatient department with a feeling of foreign body sensation behind the nose since 3 months. He also noticed a globus sensation in the roof of throat. Nasal endoscopy showed a pinkish fleshy globular mass about 2×1×1 cm in the right side of nasopharynx, which was soft in consistency, smooth surface, not bleeding to touch. Rest of nasal cavity examination was unremarkable.

Contrast enhanced CT imaging of nose and paranasal sinuses revealed a well-defined polypoidal soft tissue density lesion seen arising from the posterolateral wall of nasopharynx, which approximately measures 1.8×1.3×1.2 cm in size. The lesion showed homogenous postcontrast enhancement. The patient was posted for endoscopic guided excision biopsy of the nasopharyngeal mass under general anesthesia. Through transnasal endoscopic approach, excision of the nasopharyngeal mass was done in toto, and the entire specimen sent for histopathological examination.

Gross findings of histopathology were, a single piece of tissue measuring 2×1×1 cm in the greatest dimensions, greyish white in color, soft in feel and cut surface showing whitish area. Microscopic examination revealed an endophytic or inverted growth pattern consisting of markedly thickened squamous epithelial proliferation growing downward into the underlying connective tissue stroma to form large clefts, ribbons and islands. Epithelium was hyperplastic, 5 to 30 cell layers in thickness, and was predominantly squamous with focal areas of transitional and respiratory type. There was minimal loss of basal polarity, and mild anisonucleosis. Transmigrating neutrophils and neutrophilic micro abscesses were seen. Stroma showed focal edema and mononuclear inflammation. No evidence of atypia seen in the section studied. Thus, the histopathological features of the excised nasopharyngeal mass were indicative of inverted papilloma with features suggestive of carcinoma in situ.

Patient is on regular follow up with nasal endoscopy for past 1 year with no evidence of recurrence till date.

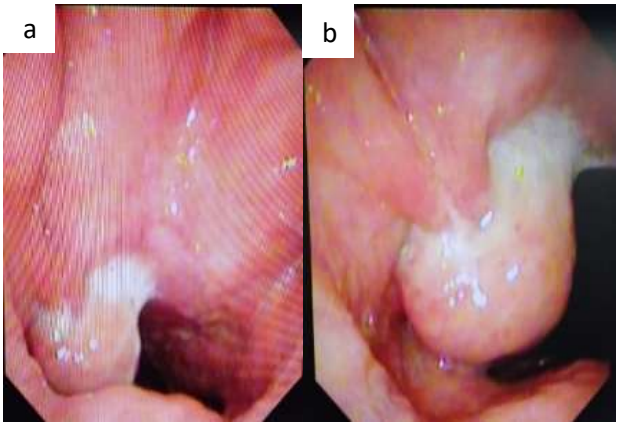

Figure 1(a, b): Nasal endoscopy images showing lesion in the right lateral wall of nasopharynx.

Figure 2: CT image (coronal view) showing the lesion.

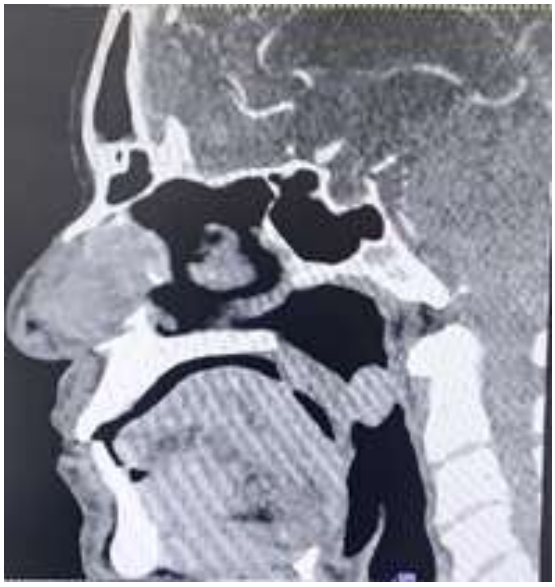

Figure 3: CT image (sagittal view) showing the location of lesion.

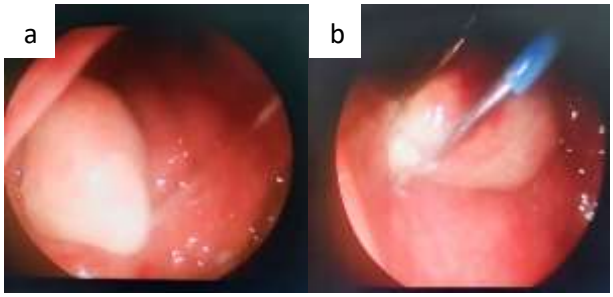

Figure 4 (a,b): Intraoperative images showing the lesion accessed under endoscopic guidance through oropharynx.

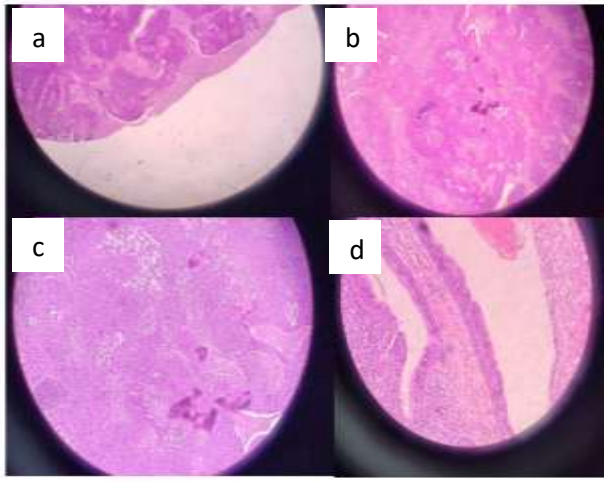

Figure 5 (a-d): Histopathological images of different magnifications showing endophytic or inverted growth pattern consisting of markedly thickened squamous epithelial proliferation growing downward into the underlying connective tissue stroma to form large clefts, ribbons and islands.

DISCUSSION

Inverted papilloma, also known as Schneider cell papilloma, is a benign epithelial tumor that accounts for a small percentage ranging from 0.5%-4% of all primary nasal tumors. The lesion is described as unilateral in 91%-99% of cases. It develops from the Schneiderian membrane, which is the specialized respiratory membrane that lines the lateral wall of the nasal cavity. The mechanism of growth causes the superficial epithelium to invert into the underlying stroma, hence the name « inverted papilloma ». The prevalence rate is highest in the fifth and sixth decades, with a significant male preponderance. Despite being a benign tumor, it is well known for its destructive capacity and aggressiveness, which can cause extensive bone damage in surrounding tissues.[5]

It has a very high potential to recur and exhibit malignant characteristics including atypia, dysplasia and carcinoma in situ. The common malignancies associated are in order of squamous cell carcinoma, malignant adenocarcinoma and small cell carcinoma (rarely seen). Although the incidence of inverted papilloma with carcinoma differs widely according to various reports, the incidence has been observed as 11% in a recent study.

The exact etiopathogenesis of inverted papilloma remains unclear, but there are certain evidences of the involvement of human papilloma virus and Epstein–Barr virus along with associated risk factors such as occupational exposures, smoking or allergy that tend to interfere with the normal functioning of the respiratory mucosa of the sinuses.[6] Complete surgical excision is the treatment of choice and endoscope is a useful adjunct that facilitates the total removal of limited lesions. The presence of cellular atypia does not correlate with a higher incidence of tumor recurrence. The average time interval to recurrence was around 56 months and this finding shows the need for long term follow up of at least 5 years.[2]

In this case, we noticed the atypical presentation of sinonasal papilloma in terms of location of the lesion, thereby leading to diagnostic challenges.

CONCLUSION

Inverted papilloma is a rare, locally aggressive and destructive lesion of the nose and paranasal sinuses with high recurrence rates and potential carcinomatous changes. Hence, it is essential for surgeons to timely diagnose the lesion and treat them accordingly. Furthermore, this requires regular follow up for at least 5 years with nasal endoscopy as well as imaging to rule out any recurrence or malignancy.

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