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Case Report

Exposition of an unusual presentation: a case report of benign tumor arising from an uncommon origin

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ABSTRACT

The inverted papilloma is a benign neoplasm that originates from the sinonasal mucosa, which is also referred to as a Ringertz tumor. It mostly affects men, falling within the age groups of 50 to 60 years. Our case is rare of its type as it was present in an unusual site, which is from the middle turbinate. Here in our study, we report a case of a 25-year-old female presented to the ENT outpatient department with complaints of left-sided nasal obstruction for 4 years. The patient had noticed a pinkish mass in the left nasal cavity. She complained of intermittent episodes of left-sided nasal bleeds. The patient was planned for functional endoscopic sinus surgery with a partial middle turbinectomy under general anaesthesia. Histopathological examination showed polypoidal tissue fragments lined predominantly by non-keratinized stratified squamous epithelium, along with focal areas lined by respiratory-type pseudostratified columnar epithelium and transitional epithelium, with multiple foci of inward proliferation of the epithelium in the form of nests into the underlying sub epithelium with an intact basement membrane, which is suggestive of inverted papilloma. After one week of postoperative follow-up, patient's symptoms of nasal obstruction were relieved. During the subsequent 6 months of follow-up, the patient had no evidence of tumor recurrence. In our case, we wanted to emphasize that not all cases that do not involve the maxillary sinus or the medial wall of the maxilla on a CT scan require medial maxillectomy.

Keywords: Benign, Inverted papilloma, Middle turbinate, Sinonasal papilloma

INTRODUCTION

Inverted papilloma is a benign epithelial growth outspreading into the underlying stroma of the nasal cavity and paranasal sinuses. The tumor is widely recognized for its invasiveness, recurrence and association with squamous cell carcinoma.[1]

Only, a small percentage of them have the potential to become malignant, most often the squamous cell carcinoma.[2] The inverted papilloma has an incidence rate of 0.6 cases per 100,000 people annually. It often originates in the middle meatus of the lateral nasal wall and often spreads to the maxillary and ethmoid sinuses.[1]

CASE REPORT

A 25-year-old female presented to ENT outpatient department with complaints of left-sided nasal obstruction for 4 years. The patient had noticed a fleshy mass in the left nasal cavity, which was associated with a running nose, postnasal drip and anosmia of the left nasal cavity. She also complained of intermittent episodes of left-sided nasal bleeds. The patient also presented with a previous history of left-sided nasal surgery for the same condition seven years ago. On examination of the left nasal cavity, a pinkish fleshy mass with an irregular surface occupies the entire left nasal cavity, extending up to the left posterior choana. The mass was soft in consistency insensitive to touch, bleeds on touch and the

mass could be probed all around except laterally. Nasal endoscopy showed a pinkish fleshy mass completely obstructing the left nasal cavity until the nasal vestibule; hence, 0-degree endoscope could not be negotiated beyond the pinkish mass. The examination of the right nasal cavity was found to be normal. Contrast-enhanced CT of the paranasal sinuses showed a soft tissue mass occupying the entire left nasal cavity, left maxillary, frontal, anterior and posterior ethmoids (Figure 3).

Hyperosteosis was identified in the left middle turbinate. There was no evidence of any bony erosions. The medial wall of maxilla and maxillary sinus were found to be spared. The patient was planned for functional endoscopic sinus surgery with a partial middle turbinectomy. The left nasal cavity was decongested and a irregular surfaced pinkish mass was debulked using a microdebrider. After debulking the tumor, the site of origin was seen to arise from the antero-lateral part of the middle turbinate. The hyperosteogenic papillomatous mass was dissected completely from the middle turbinate.

Figure 1: Fleshy papillomatous mass occupying entire left nasal cavity.

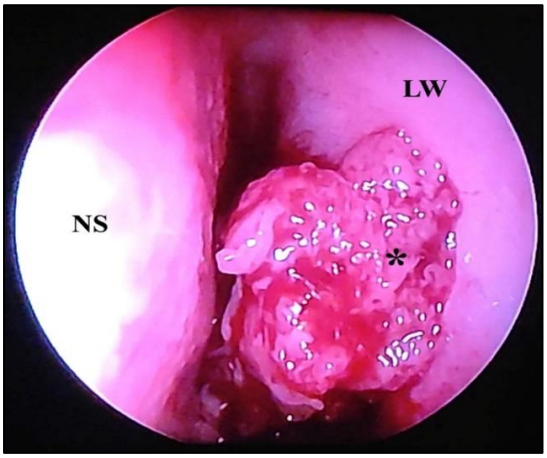

Figure 2: Tumour attachment to the antero-lateral part of middle turbinate (*), NS - Nasal septum, LW - Lateral wall of nasal cavity, arrow mark for middle turbinate.

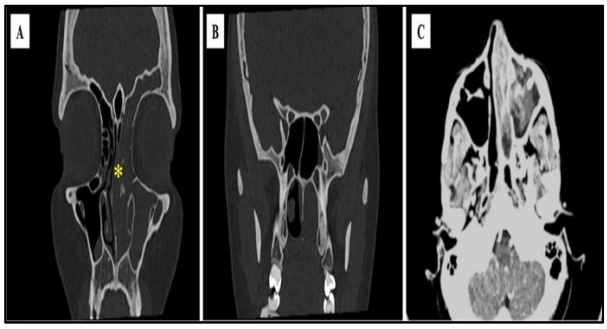

Figure 3: (A & B) Coronal cuts of non-contrast enhanced computed tomography (NCCT) PNS showing hyperostotic focus (indicated in yellow asterisk in left maxillary ethmoid and frontal sinus opacification, with non-involvement of sphenoid sinus, (C) axial view of Contrast-enhanced computed tomography (CECT) PNS complete soft tissue opacification with polypoidal thickening within the left maxillary sinus.

Figure 4: Post operative specimen.

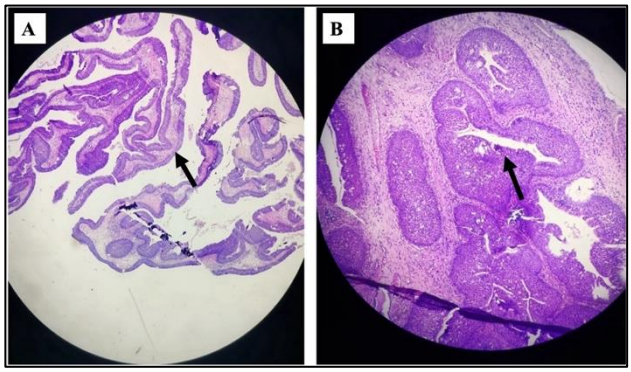

Figure 5: H and E Staining of intraoperative specimen (A) 10x Magnification and (B) 40x Magnification. Black arrow indicates the inward proliferation of cells in the form of nests into the sub epithelium with intact basement membrane.

A partial middle turbinate resection was done. There was no attachment of the tumor to the medial wall of the maxilla. Uncinectomy, middle meatal antrostomy, anterior and posterior ethmoidectomy were done to create ventilation for the sinuses. Histopathological examination showed polypoidal tissue fragments lined predominantly by non-keratinized stratified squamous epithelium, along with focal areas lined by respiratory-type pseudostratified columnar epithelium and transitional epithelium, with multiple foci of inward proliferation of the epithelium in the form of nests into the underlying subepithelium with an intact basement membrane, which is suggestive of inverted papilloma (Figure 4).

After one week of postoperative follow-up, patient's symptoms of nasal obstruction were relieved. During the subsequent 6 months of follow-up, the patient had no evidence of tumor recurrence.

DISCUSSION

The inverted papilloma is a benign neoplasm that originates from the sinonasal mucosa, which is also referred to as a Ringertz tumor, schneiderian cell papilloma.[3] It mostly affects men more persistently, about 4–5 times, falling within the age groups of 50-60 years. Functional signs and symptoms include nasal obstruction, anterior and posterior rhinorrhoea, epistaxis, hyposmia or anosmia. In our study, the patient was a young female who complained of post-nasal discharge, watery nasal discharge, anosmia of the left nasal cavity, and nasal bleeding after using pressure or force to clear his nose. A substantial pinkish tumor was found to be totally blocking the left nasal cavity during clinical and endoscopic examination of the nasal cavities.

The treatment of choice is surgery which is either external or fully endoscopic medial maxillectomy which remains as the treatment of choice for most of the lesions involving a significant area of the medial maxillary wall, whereas endoscopic approaches are used only for tumors of limited extensions. Some clinically rare findings of inverted papilloma are witnessed in other areas of the nasal cavity, like the middle turbinate, sphenoethmoidal recess, frontal recess/sinus, and also the medial orbital wall.[1] Inverted papilloma are often identified by biopsy, and the most common surgical therapy for these conditions is medial maxillectomy.[4] The position and extent of the inverted papilloma's attachment determine the surgical management.

Using a microdebrider to first debulk the tumor is a crucial step in determining the degree of surgery required to completely eradicate the tumor. Patients should be monitored for at least five years after receiving treatment since tumor recurrence often happens during the first two years, but it can also happen after five or six years.[1] The Schneiderian plaques are made up of either squamous, columnar or an intermediate type of epithelium between columnar and squamous epithelium.[5,6] Roughly, 5–10% of Schneiderian papillomas develop into malignancies. Frank squamous cell carcinomas make up the majority of carcinomas from Schneiderian papillomas.[7] The patient's medical history suggests that the current lesion may be a recurrence illness, but our patient has not experienced any recurrence for up to 6 months following the surgical procedure at our institution. Considering the malignant nature of the tumor, we believe that persistent close monitoring of the patient is necessary for timely intervention.

CONCLUSION

Locating the origin of an inverted papilloma is crucial in completely removing these tumors and avoiding their recurrence. Performing several biopsies may be necessary to confirm inverted papilloma and to exclude the malignant nature of the disease, which should be the main objective. In our case, we wanted to emphasize that the tumour did not involve the maxillary sinus or the medial wall of the maxilla on a CT scan hence it doesn't require medial maxillectomy. In our study, the nasal tumor was removed using a transnasal route utilizing an endoscope, preventing the necessity for medial maxillectomy. Surgeons must constantly keep in mind to scrutinize the origin of papillomatous growth and excise the growth completely on the operating table before going for aggressive techniques.

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Ethical approval: Not required

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