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CASE REPORT

Inverted Papilloma Of The Nose -A Case Report

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Abstract

Inverted papilloma is a lesion of the mucosal membrane of the nasal cavity and the paranasal sinuses. It is a rare tumour occurring in approximately 0.5% of all the nasal tumours and represents 4% of all the nasal polyps. Here, we are reporting a case of inverted papilloma of the right nasal cavity. The aetiology and clinical and histological features and the treatment with the review are discussed.

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Introduction

Inverted papilloma is a benign lesion occurring in the nasal cavity and the paranasal sinuses. Even though these tumours are classified as benign, they are known to cause local destruction, they are known to recur and they can also undergo malignant transformation. The mucosal lining of the nose and the paranasal sinuses is known as the Schneiderian membrane in the memory of Victor Conrod Schneider who described its histology. Papillomas arising from this membrane are very unique as they are found to grow inwards and hence, they are termed as inverted papillomas.[1]

The most common sites are the lateral nasal wall, the septum, the floor of the nasopharynx, the sphenoid and frontal sinus and the lacrimal sac. A majority of these patients fall in the age group between 50 – 70 years. It is three times more common in males than in females. The exact location, extension and the histological evaluation of the tumour is very important in

order to decide the surgical modality. Here, we are presenting a case report of inverted papilloma of the nose. The aetiology, diagnosis and treatment are discussed here.

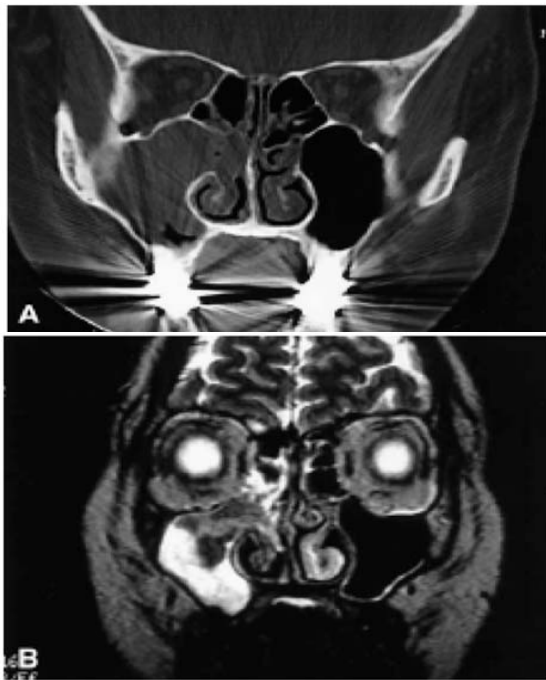
Case Report

A 70 year old male patient reported to our hospital complaining of right nasal obstruction and bleeding from the nose since 1 year. The personal history was not significant and the clinical examination revealed a mass in the right nasal cavity, as shown in [Table/Fig. 1].

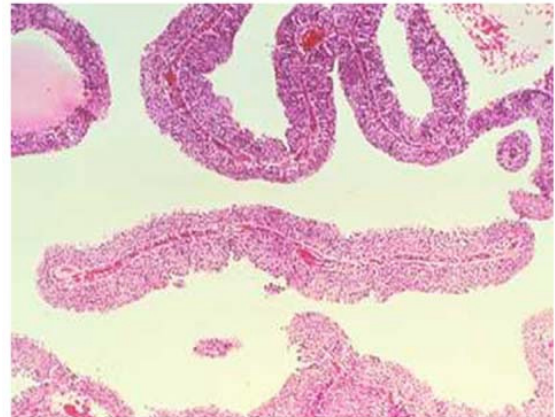


[Table/Fig 1]: Lesion in right nose

The CT scan revealed an extension to the right maxillary sinus and to a part of the ethmoid sinuses, as shown in [Table/Figs 2] and [3]. Incisional biopsy was done, which was suggestive of inverted papilloma, with no association of malignancy, as shown in [Table/Fig 4].



[Table/Fig 2] and [3] : CT scan showing lesion in the right maxillary sinus extending to ethmoid sinus.



[Table/Fig 4]: Histopathological feature

The right nasal rhinotomy incision was placed and the lesion was exposed, as shown in [Table/Figs 5] and [6].



[Table/Fig 5] and [6]: Exposure of the lesion

Mass excision was done along with medial wall of maxillectomy, as shown in [Table/Fig 7].



[Table/Fig 7]: Excised mass.

The mucosectomy of the maxillary and the ethmoid sinuses was also done. A nasal pack was placed as shown in [Table/Fig 8] and the wound was closed [Table/Fig 9].



[Table/Fig 8]: Nasal pack placed

The patient was put on antibiotics and analgesics for 5 days. His post operative histopathological report was suggestive of inverted papilloma, with no signs of malignancy. There were no signs of recurrence in a follow up period of 1 year.



[Table/Fig 9]: Wound closed

Discussion

Inverted papilloma of the nose and the paranasal sinuses are rare lesions and constitute about 0.5-4% of all tumorous lesions of the nose and the sinuses. Ward, in 1854, described the macroscopic features of papilloma of the nose. Billroth, in 1855, used the term 'villous carcinoma' to describe inverted papilloma, because of its propensity to destroy the local tissues and because of its recurrence after surgery. Ringertz, in 1938, coined the term 'inverted papilloma' after recognizing the characteristic endophytic growth pattern which was demonstrated by this type of papilloma.

There are many different names which are used to describe various papillomas. These include fungiform papilloma, cylindrical papilloma, Schneiderian cell papilloma, epithelial papilloma and many more.[2] Inverted papilloma has an unknown aetiology. There have been many causes which have been suggested, such as allergy, chronic sinusitis, smoking and occupational exposure to noxious agents. A recent study has shown the presence of the human papilloma virus in specimens of inverted papillomas.[2]

The characteristic attributes of inverted papilloma of the nose are the presence of associated nasal polyps, its destructive capacity, its tendency to recur even after complete surgical removal of the mass and its malignant transformation. The symptoms include unilateral nasal obstruction, nasal discharge, epistaxis, head ache, sinusitis and swelling involving the nose and very rarely, there will be anosmia, healing impairment, epiphora, numbness over the cheek, altered speech and proptosis[1]

Microscopically, the lesion has a thickened epithelial covering with extensive invasion of the hyperplastic epithelium into the underlying stroma. The tumour has crypts which are subepithelial and maintain connection to the surface epithelium at all times, a finding which led to the name 'inverted papilloma'. The covering epithelium can be squamous, respiratory or transitional cell epithelium, or a combination of all the three.² The cells show minimal nuclear atypia with the typical basilar layer mitosis. The tumour appears to invaginate or infold into the surrounding

underlying bone. CT scan helps to assess the extent of the lesion and its boundaries. MRI shows excellent soft tissue resolutions.

The incidence of focal malignancy within an inverted papilloma or at a site adjacent to the papilloma ranges from 1% to 53%.[2] Inverted papillomas, although they are benign, they are notorious for eroding the bone and infiltrating soft tissues and vital structures at the base of the skull.

The primary focus of the treatment for inverted papilloma is to avoid recurrence and its management should therefore include complete resection of the tumour as the initial procedure. In most cases, surgery is the treatment of choice and the lateral rhinotomy approach is best suited for inverted papilloma of the nose.[3]

Chen C M, et al[4] conducted a study to determine the recurrence rate of inverted papillomas depending on diagnosis and confirmation pre operatively, intra operatively or post operatively. The results showed that the rate of recurrence was 33%, in which inverted papilloma was not confirmed until the post operative histopathological report was ready, it was 11% in which inverted papilloma was confirmed intra operatively and it was 5% in which inverted papilloma was confirmed pre operatively. Myers EN, et al[5] suggested lateral rhinotomy and en bloc resection of the lateral nasal wall, followed by meticulous removal of all mucosa in the ipsilateral paranasal sinuses, which remains as the standard therapy. Gomez JA et al[6] concluded surgery is the primary treatment.

Radiation therapy should be considered in patients with incompletely resectable lesions, multiple recurrent tumours, and tumours which are associated with malignancy.

Lawson W et al[7] reported that pre operative radiographical assessment is of paramount importance in guiding the selection of surgical therapy. Complete en bloc resection via lateral rhinotomy and medial maxillectomy was the treatment of choice.

Conclusion

Inverted papilloma of the nose represents a benign neoplastic proliferation with high recurrence rate. It has the character to invade adjacent structures such as the orbit and the central nervous system and it causes malignant transformation. Although surgery is the primary treatment; the extension and the histological features prior to surgery are determinants of the outcome of the disease.

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