An Unusual Case of Nasal Septal Schwannoma: A Case Report

Introduction
Terplan and Rudofsky first reported a case of left nasal cavity and ethmoid sinus neurinoma in 1926. Although 25-45% of Schwannomas arise in the head and neck region, only 4% of them present in the nose and paranasal sinus. Generally it involves the ethmoidal and maxillary sinuses. It may arise from the branches of trigeminal nerve (ophthalmic or maxillary) or from autonomic nervous system. The diagnosis by imaging is difficult due to lack of characteristic features. A variety of sino-nasal tumours share similar imaging features; hence histopathological diagnosis is the gold standard.

Case report
A 38 year old female presented with bilateral nasal blockage (Left >Right) since 2 years which gradually progressed to cause complete blockage. It was associated with mucoid nasal discharge and hyposmia. There was a single episode of epistaxis. Anterior rhinoscopy showed left nasal polyp. CT scan and MRI of the paranasal sinuses were performed. MRI of the paranasal sinuses showed a heterogeneous mass lesion which is hypointense on T1WI and hyperintense on T2WI with patchy central necrotic areas and hemorrhages, intensely enhancing on contrast. Endoscopic approach helped to prevent unwanted removal of healthy nasal mucosa and the anterior and superior septum which helped to maintain the shape of the nasal dorsum. Histopathological analysis of the tumour showed spindle cells arranged in Antony A and Antony B pattern.

Conclusion: Sino-nasal schwannoma is a well-defined soft tissue mass with pressure remodelling of surrounding structures clinical or radiological diagnosis is not conclusive and hence histopathology is the gold standard for diagnosis. Complete surgical excision can be achieved by endoscopic approach successfully.

Abnormal Tenderness
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Histopathological analysis of the tumour showed spindle cells arranged in Antony A and Antony B pattern. Verocay bodies were seen. There was a focal nuclear pleomorphism with tumour cells expressing S-100 protein but they were negative for HMB-45.
Discussion
The symptomatology of the schwannomas is nonspecific. Patient may present with nasal blockage, nasal discharge, headache or epistaxis 5,6. Facial swelling and eye signs may present depending on paranasal sinus and orbital involvement. Conversion to malignancy is rare 7. In many cases the nerve of origin cannot be identified and neurological symptoms are also not seen. In our case patient had nasal block, mucoid nasal discharge, hyposmia and epistaxis with no orbital signs.

CT scan or MRI of the paranasal sinuses generally shows well-defined soft tissue mass lesion with thinning of surrounding bones 1. It helps to assess size, location, extent, vascularity and MRI was done to rule out any intracranial and intra-orbital extensions as well as in differentiating inflammation and retained secretions form the tumor 8,9. In our case CT and MRI displayed a well-defined contrast enhancing soft tissue lesion with smooth erosion and scalloping of adjacent bony walls with secondary sinusitis in maxilla, frontal and sphenoid. There were no features suggestive of malignancy.

Microscopically typical schwannomas exhibit Antony A and Antony B pattern in varying proportions. Antony A is composed of organised stroma with spindle cells with parallel rows of palisading nuclei. Antony B areas are composed of disorganised myxoid stroma with few spindle cells 7. On immunohistochemistry S-100 protein may be exhibited especially in Antony A areas 11. All the above mentioned features were characteristically seen in the histopathology of our case.

Functionality and cosmesis were maintained.

Conclusion
Sino-nasal schwannoma is a well-defined soft tissue mass with pressure remodelling of surrounding structures clinical or radiological diagnosis is not conclusive and hence histopathology is the gold standard for diagnosis. Complete surgical excision can be achieved by endoscopic approach successfully. Hence, though rare diagnosis, the possibility should be considered in differential diagnosis of a benign looking chronic nasal mass.

Fig 1 Coronal view of CT PNS showing well defined septal mass lesion.

Fig 2. Axial view of MRI PNS showing heterogenous enhancement of septal mass with cystic degeneration.

The only treatment for nasal schwannomas is complete local excision as they are generally radio resistant 5. The approach is selected depending on the size of the tumor and cosmetic consideration 6,11. Presently endoscopic surgery has both the above advantages and hence was selected in our case. As the tumour in our case was arising from the septum, complete excision was successfully performed with a posterior septectomy with no postoperative recurrence.

References: