

Schwannoma of Nasal Inferior Turbinate in Young Male: A Rare Occurrence

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ABSTRACT

A 12-year old boy presented to the ENT Department of Abbasi Shaheed Hospital, Karachi, with a one year history of progressively increasing unilateral right sided nasal obstruction. He denied any other symptoms like that of rhinorrhea, epistaxis, facial pain, headache and any history of nasal trauma. After routine clinical examination, CT scan nose/PNS with contrast was advised and subsequently biopsy was done that revealed the mass to be as schwannoma. This was then removed via a lateral rhinotomy approach and the postoperative specimen again revealed the same. The boy was followed for 1-year and no recurrence is seen. He is still in the follow-up phase.

Key Words: *Nasal mass. Nasal polypoidal lesion. Benign nasal lesions.*

INTRODUCTION

Schwannomas are lesions that arise from the neural sheath of peripheral nerves, autonomic nerves, or cranial nerves. Nerve sheath tumors of the head and neck region mainly involve the eighth cranial nerve with only 4% occurring in the paranasal sinuses.^{1,2} Occasionally, malignant schwannomas also occur in the paranasal sinuses. Sinonasal schwannomas do not have specific radiologic findings. The tumor rarely extends intracranially or intraorbitally, and imaging features can be similar to malignant neoplasms.³ According to Hillstrom,⁴ electron microscopy and immune-histochemistry help in differentiating this tumor from neurofibromas.

CASE REPORT

A 12-year old boy was presented to the ENT Department at Abbasi Shaheed Hospital, Karachi, with the complaint of right sided nasal obstruction for the last 01 year that has been progressively increasing and slight broadening of the nasal bridge. The child and the family denied any history of nasal trauma. There were no symptoms of nasal discharge, nasal bleeding, facial pain and headache.

On examination of the nose, broadening of the nasal bridge was seen and on the right side, a large red fleshy looking mass was noted which was completely occupying the right nostril but wasn't protruding out. It was reddish in color, firm in consistency and did not bleed on touch (Figure 1). Because of pressure effect,

left sided DNS was also seen. The rest of the ENT examination was unremarkable. A CT scan of nose/PNS with contrast was advised that showed large soft tissue density mass of 5 x 3.4 x 4.5 cm size in the right nasal cavity arising from the lateral wall with minimal enhancement and no infiltration into the surrounding structures (Figure 2 and 3). A punch biopsy was done and tissue was sent for histopathology. The report read intersecting fascicles of spindle cells with spindly shaped nuclei and moderate cytoplasm; verocay bodies were noted with no significant pleomorphism, mitosis or necrosis. It was strongly positive for S-100 (++) and negative for SMA. Features were suggestive of schwannoma (neurilemmoma). With the working diagnosis of nasal schwannoma the child was admitted and routine work-up was done for fitness for general anesthesia. The child was operated via a right lateral rhinotomy approach and mass was removed and sent for histopathology. Child's recovery postoperatively was unremarkable (Figure 4). He was discharged on 2nd postoperative day and stitches were removed on 7th day. The histopathology re-confirmed the diagnosis of nasal schwannoma. The child is being followed for almost a year now in ENT out-patient department and so far no recurrence has been observed.

DISCUSSION

There are about 70 reports of nasal schwannomas in the literature. Most of them are found in adults between 40 and 60 years of life, while this patient was 12 years old. According to Hasegawa,⁵ the age of patients with this type of lesion varied between 12 and 76 years. In Leakos report,⁶ the patient presented with nasal obstruction, anosmia and nasal pyramid deformity, but not epistaxis. The cases reported by Lacosta and Alessandrini complained only of nasal obstruction.^{7,8}

Hasegawa concluded that the most common symptom is nasal obstruction with epistaxis.^{5,9} Microscopically, it

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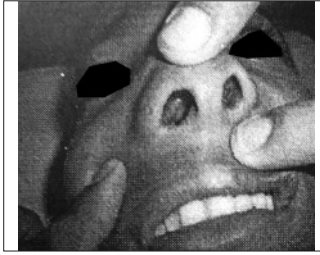


Figure 1: Showing right nasal mass.

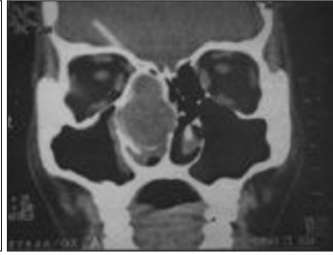


Figure 2: CT nose/PNS axial view.

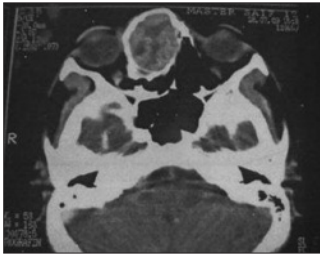


Figure 3: CT nose/PNS coronal view.



Figure 4: Postoperatively the patient.

shows the typical elongated or spindle shaped cell with an oval or flattened nucleus, usually with a palisading effect. These tumors are composed of cytologically benign appearing cells that have the typical morphologic and ultra-structural features of Schwann cells in a collagenous matrix. Immuno-histochemistry reaction with Anti S-100 protein, anti-Glial Fibrillary Acidic Protein (GFAP), and vimentin is used to confirm the neuronal cell origin. By nature schwannomas are slow growing tumors but they can become very large, expanding and eroding bone by the pressure exerted on its surroundings. This is seen more in deep seated lesions such as mediastinal and retroperitoneal neoplasms.¹⁰ Diagnosis is facilitated by endoscopy, CT and MRI. Endoscopy typically reveals a unilateral polypoid nasal mass. CT reveals a unilateral nasal mass that may be expansile. Schwannomas can cause bone remodeling by pressure and this behavior can lead to misdiagnosis as a malignant process. Preservation of bony margins

can be helpful in differentiating schwannomas from malignant tumors.

The treatment of choice in schwannomas is surgical excision of the tumor. Surgical resection is usually curative. If tumor is confined to the paranasal sinuses, the prognosis is excellent.¹¹ For most cases, lateral rhinotomy affords the best access to the nasal cavity and paranasal sinuses.¹⁰

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