

ORIGINAL ARTICLE

## Hemangiopericytoma: A rare sinonasal tumor

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### KEYWORDS

Zimmerman's capillary pericytes;  
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**Abstract** *Introduction:* Hemangiopericytomas are rare, vascular neoplasms that are derived from Zimmerman's capillary pericytes. They are found most commonly in the retroperitoneum/pelvis and lower extremities and are known to have malignant biological behavior. Of the paranasal sinuses, ethmoid and sphenoid sinuses are most commonly involved.

*Case Report:* We report an uncommon case of a 77-year-old man, who presented with history of nasal block, nasal discharge and epistaxis since 10 years. On examination, there was a fleshy polypoidal mass seen filling the entire right nasal cavity. CT scan of the osteomeatal complex revealed a soft tissue density lesion occupying the entire right nasal cavity, projecting through the posterior choanae into the nasopharynx. An endoscopic excision of the entire mass was done. Histopathological examination and immunohistochemistry confirmed the diagnosis of Hemangiopericytoma.

*Discussion:* Hemangiopericytoma is a rare vascular tumor. These lesions are more frequently reported in the seventh decade of life, and the usual presentation includes epistaxis and nasal obstruction. While corticosteroid use, hypertension and pregnancy have been proposed as etiological factors in the development of HPC, this is not widely accepted. It exhibits low malignant potential and distant metastasis is exceedingly rare.

*Conclusion:* Hemangiopericytomas of the nasal cavity and paranasal sinuses exhibit low malignant potential and distant metastasis. The treatment of choice is wide surgical resection which is the only curative modality.

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### 1. Introduction

Hemangiopericytomas (HPC) are rare, vascular neoplasms, derived from Zimmerman's capillary pericytes, which surround all capillaries, and which account for 1% of all vascular tumors.<sup>1</sup> Initially described by Stout and Murray, they are found most commonly in retroperitoneum/pelvis and lower extremities and are known to have malignant behavior. 7.5–25% of all HPCs are found in the head and neck region, with a marked tendency to occur in nasal cavity and paranasal

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sinuses.<sup>1,2</sup> Of the paranasal sinuses, ethmoid and sphenoid sinuses are most commonly involved. HPCs at these sites do not have the same risk of malignancy and metastasis as HPCs elsewhere.

Due to variation in histological and clinical features of sino-nasal type hemangiopericytomas, compared with their soft tissue counterparts, it is now widely accepted that these tumors represent an independent clinical entity, referred to as glomangiopericytoma, due to its similarity to glomus tumors.<sup>3</sup>

Effective management requires wide surgical excision with clear resection margins, as these tumors are relatively radioresistant. Recent advances in endoscopic surgery have led to the development of techniques that now permits endoscopic resection.

## 2. Case report

A 77 year old man presented to our service with history of nasal block and nasal discharge since 10 years. He also had occasional episodes of epistaxis and headache. He was a known case of diabetes and hypertension on long term aspirin treatment.

On examination, there was a fleshy polypoidal mass seen filling the entire right nasal cavity, displacing the septum to the left side. There was a minimal bleeding on touch. Postnasal examination revealed the mass extending into the nasopharynx through the right choanae.

A CT scan of the osteomeatal complex was performed, which revealed a soft tissue density lesion occupying the entire right nasal cavity, projecting through the posterior choanae into the nasopharynx, deviating the septum to the left and medial wall of the maxillary sinus to the right. The lesion was superiorly displacing the ethmoid sinus laterally and extending to the cribriform plate (Fig. 1).

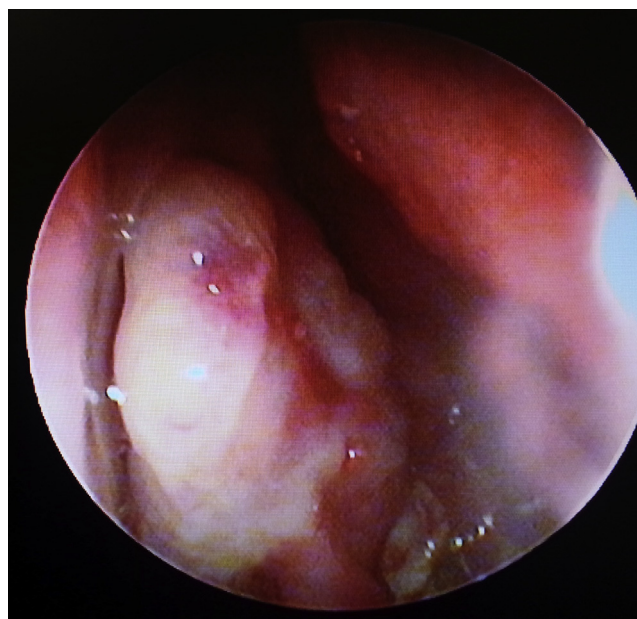
The patient was posted for surgery and an endoscopic excision of the lesion was done. The lesion was initially mobilized



**Figure 1** CT scan showing mass filling the entire right nasal cavity and displacing the septum and medial wall of maxillary sinus.



**Figure 2** Post operative specimen removed from the right nasal cavity.



**Figure 3** Follow Up sinuscopy showing nasal cavity to be free of growth.

from the nasopharynx into the nasal cavity and debulking was done. Following this sinuscope was passed. The lesion was seen to be arising from the sphenothmoidal region. Endoscopic excision of the mass was carried out. The right maxillary sinus ostium was widened and sinus was filled with purulent discharge. Mass was completely removed from the ethmoidal and sphenoid region (Figs. 2 and 3).

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