



Unusual Presentation of a Sinonasal Mass: A Case Report

Mogla S, Kumar S and Pandey AK*

Department of ENT, Sri Guru Ram Rai Institute of Medical and Health Sciences, Patel Nagar, Dehradun, India

***Corresponding Author:** Pandey AK, Department of ENT, Sri Guru Ram Rai Institute of Medical and Health Sciences, Patel Nagar, Dehradun, India.

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Abstract

This case report discusses the preoperative assessment and management of a sinonasal mass in a 54-year-old male, initially suspected to be a case of sino-nasal polyposis based on clinical presentation and imaging findings. The patient underwent surgical intervention, but the postoperative histopathological examination revealed an unexpected diagnosis of Angiofibroma. This report highlights the importance of comprehensive preoperative evaluation, including imaging and biopsy, to avoid misdiagnosis and ensure appropriate management of sinonasal masses.

Keywords: Sinonasal Mass; Angiofibroma

Introduction

Sinonasal masses are comprised of a broad spectrum of pathological conditions that involve the nasal cavity and the adjacent paranasal sinuses. They can range from benign inflammatory processes such as nasal polyps to various malignant tumours of varying aggressiveness. Sinonasal masses can be encountered in all age groups but are more commonly encountered in adults. The etiological factors leading to Sinonasal masses vary significantly with the most common causes being inflammatory conditions and allergic rhinitis. On the other end, rare malignant tumours can be highly aggressive with a poor prognosis. Persistent nasal obstruction on one side may suggest the presence of a sinonasal lesion, which may have an inflammatory or neoplastic etiology [1,2]. Mostly the cases of sinonasal masses come out to be inflammatory polyp, but in unilateral pathologies, neoplastic lesions can also occur.

Patients experiencing unilateral sinonasal masses may exhibit a variety of symptoms including rhinorrhoea, epistaxis, nasal obstruction, facial pain, diminished or altered sense of smell, protrusion of the eye (proptosis), and double vision (diplopia) [3]. It is difficult to differentiate these symptoms from rhinosinusitis or the

common cold at the time of onset. It is thus important to carefully evaluate these patients by taking a thorough history, clinical examination, endoscopic and radiological evaluation [4,5]. This case report aims to shed light on the diagnostic challenges and treatment strategies encountered in managing Sinonasal masses. By presenting a rare clinical scenario and discussing the clinical, radiological, and histopathological aspects of this case, we hope to provide a better understanding of Sinonasal masses and emphasize the importance of early diagnosis and intervention for improving the patient outcome.

Case Report

A 54-year-old male presented to ENT OPD with complaints of recurrent mild bleeding from the right nasal cavity on and off for 10 years, nasal obstruction right nasal cavity for 5 years, discharge bilateral nasal cavity from 7-8 months, and mass in the right nasal cavity from 7 months. On clinical examination, a smooth, pale glistening mass was seen in the right nasal cavity which was soft, insensitive to touch S/O Nasal polyp. DNE and Routine blood investigations were done followed by CECT PNS.

On CECT PNS, a large heterogeneously enhancing mass lesion was noted in the right nasal cavity which was extending laterally in the right maxillary sinus, posteriorly into the nasopharynx via choana. Medially the lesion was causing bulging of the nasal septum towards the left side with erosion of bony nasal septa. Erosion of the medial wall of the maxillary sinus was also noted. Those features suggested the possibility of a neoplastic etiology.

A preoperative biopsy was taken from the nasal mass and sent for histopathological examination which came out to be suggestive of nasal polyposis.

Per-operative findings

The polypoidal mass was seen in the right nasal cavity, on its removal another smooth brownish mass was seen filling the whole nasal cavity and extending into the right maxillary sinus which led to profuse bleeding on its removal.

Also, there was mild erosion of the medial wall of the maxillary sinus and lateral displacement of the nasal septum into the left nasal cavity.

Endoscopic excision of mass from the right nasal cavity and right maxillary sinus was done under GA and sent for histopathological examination in two separate containers.

Management and outcome

The patient underwent endoscopic excision of mass from the right nasal cavity and maxillary sinus under GA and the surgical pathology report obtained from the biopsy revealed an inflammatory nasal polyp from the sample in container A. Sample in Container B was indicative of angiofibroma with secondary changes.

Postoperatively, the patient was thoroughly evaluated for hormonal disturbances, including hormonal assays and imaging of the pituitary gland. However, no underlying hormonal abnormalities were identified.

Given the benign nature of angiofibroma and its limited extension, a conservative approach was chosen for management. The patient was closely monitored with periodic endoscopic examinations and imaging. No evidence of tumor recurrence or regrowth was observed during the one-year follow-up period.



Figure 1: A glistening mass was seen in the right nasal cavity on DNE pre-operatively.



Figure 2: CECT PNS - large heterogeneously enhancing mass lesion in right nasal cavity extending laterally in the right maxillary sinus, posteriorly into the nasopharynx via choana. Medially the lesion was causing the bulging of nasal septa towards left side ? Neoplastic etiology.



Figure 3: Intra-operative visualization of the mass lesion.

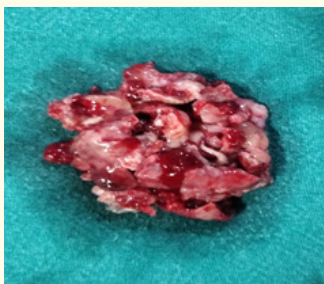


Figure 4: Excised nasal mass.

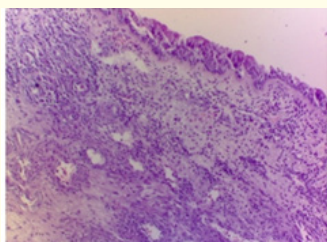


Figure 5: Histopathology showed features of an inflammatory nasal polyp and angiofibroma with secondary changes.

Discussion

Diagnosing sinonasal masses can be difficult because of overlapping of clinical symptoms and radiological findings among various pathologies. Common symptoms, such as nasal obstruction, nasal discharge, and epistaxis, are non-specific and can occur in both benign and malignant cases. Additionally, the sinonasal region contains complex anatomical structures, and the involvement of critical structures like the orbit and skull base can pose diagnostic challenges [6]. Radiological imaging such as CT scans and MRI play a very important role in the evaluation of sinonasal masses. CT scans provide detailed information on bony involvement and destruction, while MRI offers better soft tissue evaluation. However, differentiating between benign and malignant lesions based solely on imaging features can be difficult, therefore histopathological examination remains the gold standard for definitive diagnosis [7,8].

The management of sinonasal masses depends on the underlying etiology and histopathological diagnosis. Benign inflammatory conditions, such as nasal polyps and mucocoeles are often managed conservatively with medical therapies, including corticosteroids and antibiotics, or endoscopic surgical excision when required [9]. In contrast, malignant sinonasal tumours often necessitate a multidisciplinary approach, combining surgery, radiotherapy, and che-

motherapy for optimal outcomes [10]. Postoperative radiotherapy is often employed to improve local control, especially in cases of aggressive malignancies like sinonasal undifferentiated carcinoma and olfactory neuroblastoma. Chemotherapy may also be included in the treatment regimen for advanced or metastatic disease. In this case, the unexpected diagnosis of angiofibroma highlights the importance of a comprehensive preoperative evaluation, including a biopsy of suspicious lesions, to avoid misdiagnosis and prevent inadequate or inappropriate surgical interventions. An interdisciplinary approach involving otolaryngologists, radiologists, and pathologists is crucial in managing sinonasal masses effectively.

Conclusion

Angiofibroma typically presents in the second decade of life in adolescent males. In this case, on the basis of history, clinical examination, and investigations it was thought to be a case of nasal polyposis preoperatively but on HPE it came out to be nasal polyposis with Angiofibroma which is a rare finding in this age group. Therefore Sinonasal masses in adult males should be carefully evaluated for ensuring effective management and optimal patient outcome.

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