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CASE REPORT

Respiratory epithelial adenomatoid hamartoma presenting as recurrent bilateral sinonasal polyposis: A case report.

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ABSTRACT… A rare benign sinonasal tract lesion called respiratory epithelial adenomatoid hamartoma (REAH) frequently resembles inflammatory polyposis and other sinonasal neoplasms. It commonly presents with nasal obstruction and is frequently associated with chronic rhinosinusitis and nasal polyposis. We report the case of a 52-year-old male with recurrent bilateral sinonasal polyposis and a history of previous nasal surgeries in 1997 and 2012, who presented with longstanding bilateral nasal obstruction. Endoscopic sinus surgery revealed extensive fleshy polypoidal disease involving both nasal cavities and paranasal sinuses with extension through a septal perforation. Histopathological examination confirmed respiratory epithelial adenomatoid hamartoma. It highlights the importance of considering REAH in patients with recurrent sinonasal polyposis and prior surgical interventions, as accurate diagnosis prevents overtreatment and unnecessary aggressive surgery.

Key words: Endoscopic Sinus Surgery, Hamartoma, Nasal Obstruction, Respiratory Epithelial Adenomatoid Hamartoma, REAH, Sinonasal Polyposis.

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INTRODUCTION

Wenig and Heffner originally reported respiratory epithelial adenomatoid hamartoma (REAH), a rare benign glandular proliferation of the sinonasal tract, in 1995.[1] Histologically, it is distinguished by glandlike proliferations that emerge from the surface mucosa and are bordered with ciliated respiratory epithelium. REAH most commonly affects adult males and frequently involves the posterior nasal septum, lesions may extend into the paranasal sinuses.[2]

Nasal obstruction is one of the nonspecific symptoms that REAH manifests clinically., rhinorrhea, hyposmia, headache, and recurrent sinonasal polyposis. Because of overlapping clinical and radiological features, it may be mistaken for low grade sinonasal cancer, inverted papilloma, or inflammatory polyps.

For a final diagnosis, a histopathological study is therefore necessary.[3]

We report a case of extensive bilateral sinonasal REAH in a 52-year-old male with recurrent nasal polyposis and previous nasal surgeries with no available previous record.

Case Presentation

A 52-year-old male presented to the otorhinolaryngology outpatient department of SIR Ganga Ram Hospital Lahore on July 2025 with complaints of progressive bilateral nasal obstruction for the past 8 years. The nasal obstruction was associated with nasal discharge, mouth breathing, snoring, reduced sense of smell, and recurrent episodes of sinonasal congestion. There was no history of epistaxis, facial swelling, visual disturbances, or constitutional symptoms.

The patient had undergone previous nasal surgeries in 1997 and again in 2012 for sinonasal polyposis at another institution; however, no previous medical or histopathological records were available.

Anterior rhinoscopy and diagnostic nasal endoscopy revealed bilateral polypoidal masses occupying both nasal cavities. A septal perforation was noted, with

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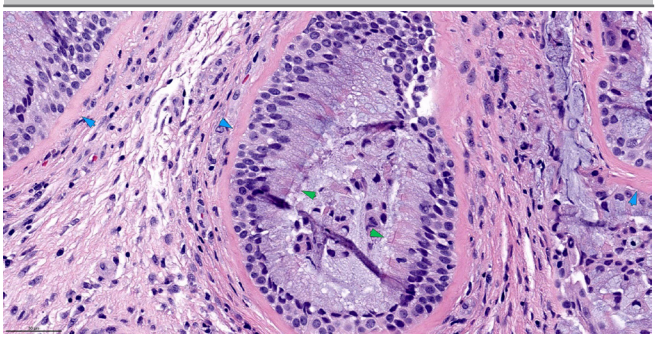
extension of the lesion from the left nasal cavity into the right nasal cavity through the perforation.

Computed tomography (CT) scan of the nose and paranasal sinuses demonstrated extensive soft tissue opacification involving bilateral maxillary, ethmoid, and sphenoid sinuses with expansion into both nasal cavities. Features were suggestive of recurrent sinonasal polyposis.

The patient underwent endoscopic sinus surgery (FESS) on August 2025 after written informed consent under general anesthesia. Intraoperatively, fleshy polypoidal mass was identified predominantly in the left nasal cavity, extending into the right nasal cavity through the large septal perforation. The lesion involved bilateral maxillary, ethmoid, and sphenoid sinuses. Complete endoscopic excision of the lesion was performed along with clearance of diseased sinonasal mucosa.

The excised specimen was sent for histopathological examination. Microscopy revealed numerous glandular proliferations lined by pseudostratified ciliated respiratory epithelium invaginating into submucosa. Glands were round to oval and surrounded by thick eosinophilic basement membranes within an edematous stroma associated with chronic inflammatory infiltrates. No evidence of dysplasia or malignancy was identified. These findings were consistent with respiratory epithelial adenomatoid hamartoma.

FIGURE-I



The postoperative period was uneventful. The patient showed significant improvement in nasal obstruction and other symptoms like mouth breathing, snoring and there was marked improvement in sense of smell. Follow-up endoscopic examinations at regular intervals and CT scan nose/para nasal sinuses revealed no evidence of recurrence/ residual disease.

DISCUSSION

The frequency of REAH, a benign hamartomatous lesion of the sinonasal tract, peaks in the fifth and sixth decades of life and is more common in men. Although the exact etiology remains unclear, chronic inflammation and longstanding sinonasal disease are believed to contribute to its development. Many reported cases are associated with chronic rhinosinusitis and nasal polyposis.

The clinical presentation of REAH is nonspecific and includes nasal obstruction, anosmia, rhinorrhea, and facial pressure. Due to its polypoidal appearance, REAH is commonly misdiagnosed preoperatively as inflammatory polyposis. In extensive cases, differentiation from inverted papilloma and sinonasal adenocarcinoma becomes important and must be ruled out.

Radiologically, REAH may present as soft tissue masses involving the olfactory clefts (widening) and paranasal sinuses. Enlargement of the olfactory cleft on CT imaging has been described as a useful clue for diagnosis. However, definitive diagnosis relies on histopathological evaluation.[4]

Histologically, submucosal glandular growth bordered by ciliated respiratory epithelium with thicker basement membranes is a characteristic of REAH. Absence of cytologic atypia and invasive features helps distinguish it from sinonasal adenocarcinoma.

Complete surgical excision remains the treatment of choice.[5] Endoscopic resection is generally curative, and recurrence is uncommon when adequately excised.[6] Recognition of REAH is important to avoid unnecessarily aggressive surgical procedures.

In the present case, the patient had recurrent sinonasal disease with previous surgeries and extensive bilateral involvement of the nasal cavities and paranasal sinuses. Histopathological examination was crucial in establishing the diagnosis and excluding neoplastic pathology.

CONCLUSION

Respiratory epithelial adenomatoid hamartoma is a rare benign sinonasal lesion that can mimic recurrent inflammatory polyposis and other sinonasal tumors. It should be considered in patients with longstanding nasal obstruction, recurrent sinonasal polyposis, and prior sinonasal surgeries. Histopathological confirmation is essential for accurate diagnosis and appropriate management. Endoscopic surgical excision provides excellent outcomes with low recurrence rates.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

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AUTHORSHIP AND CONTRIBUTION DECLARATION	
1	**Waqas Javaid:** Data collection.
2	**Ayesha Fayyaz:** Critical revisions.
3	**Mehak Ahmad:** Study concept, design.
4	**Maria Asif:** Literature review.
5	**Aamna Durrani:** Review of manuscript.
6	**Syed Muhammad Waqas:** Proof reading.