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Angiomatous Nasal Polyp Mimicking a Vascular Nasal Mass: A Case Report

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Abstract: ***Background**: Angiomatous nasal polyp (ANP) is a rare variant of inflammatory nasal polyps characterized by marked vascular proliferation, often mimicking neoplastic or vascular lesions on imaging and clinical examination. This frequently leads to diagnostic confusion and repeated inconclusive biopsies. **Case Presentation**: We report a case of a 30-year-old male who presented with left-sided nasal obstruction and recurrent epistaxis of one-month duration. Nasal endoscopy revealed a vascular-appearing mass in the left nasal cavity. Multiple preoperative biopsies were non-diagnostic. Contrast-enhanced CT of the paranasal sinuses demonstrated a contrast-enhancing mass arising from the left inferior turbinate. The patient underwent complete endoscopic excision of the mass under general anesthesia along with excision and cauterization of the inferior turbinate attachment. Histopathological examination confirmed angiomatous nasal polyp. The patient remained disease-free at one-year follow-up. **Conclusion**: Angiomatous nasal polyp should be considered in the differential diagnosis of unilateral, contrast-enhancing nasal masses with epistaxis. Complete surgical excision is curative, and recurrence is rare.*

Keywords: Angiomatous nasal polyp, unilateral nasal mass, epistaxis, inferior turbinate, endoscopic excision

1. Introduction

Inflammatory nasal polyps are common benign lesions of the nasal cavity and paranasal sinuses. Angiomatous nasal polyp is a rare histological variant, accounting for less than 5% of all nasal polyps. It is characterized by extensive vascular proliferation, hemorrhage, and stromal fibrosis, which may clinically and radiologically simulate malignant or vascular tumors such as angiofibroma, hemangioma, or sinonasal malignancy. Due to this atypical presentation, diagnosis is often delayed or uncertain. We present a case of angiomatous nasal polyp arising from the inferior turbinate, an uncommon site, highlighting the diagnostic challenges and management strategy.

2. Case Presentation

A 30-year-old male presented with complaints of left-sided nasal obstruction and intermittent episodes of nasal bleeding for one month. There was no history of facial pain, anosmia, visual disturbance, trauma, or systemic illness. The patient had undergone multiple outpatient nasal biopsies elsewhere, all of which were reported as non-diagnostic.

Diagnostic nasal endoscopy revealed a reddish, friable mass occupying the left nasal cavity, suspicious for a vascular lesion. The mass appeared to originate from the region of the inferior turbinate.

Contrast-enhanced computed tomography (CECT) of the paranasal sinuses showed a well-defined, contrast-enhancing soft tissue mass in the left nasal cavity, attached to the inferior turbinate, with no evidence of bony erosion or intracranial extension.

Given the clinical and radiological findings, the patient was planned for surgical excision under general anesthesia. Intraoperatively, a polypoidal mass measuring approximately 3.5 × 2 × 1 cm was identified arising from the left inferior turbinate. Complete endoscopic excision of the mass was performed. The attachment along the inferior turbinate was excised, and the base was adequately cauterized to achieve hemostasis. The postoperative period was uneventful.

Histopathological examination revealed respiratory epithelium lined by pseudostratified ciliated columnar epithelium. The submucosal stroma showed dense proliferation of thin-walled capillaries with areas of hemorrhage and associated lymphoplasmacytic infiltration, consistent with angiomatous nasal polyp.

The patient was followed up regularly for one year with endoscopic examinations, and no evidence of recurrence was noted.

Histopathological Findings

Microscopic examination demonstrated:

- Surface lining of pseudostratified ciliated respiratory epithelium
- Submucosal stroma with marked proliferation of numerous small capillaries
- Areas of stromal edema and hemorrhage
- Associated lymphoplasmacytic inflammatory infiltrate

These features were diagnostic of angiomatous type nasal polyp.

3. Discussion

Angiomatous nasal polyp is an uncommon benign lesion thought to result from vascular compromise and subsequent neovascularization within a pre-existing inflammatory polyp. Chronic inflammation, torsion of the polyp stalk, and venous stasis have been proposed as possible etiological mechanisms.

Clinically, ANP often presents as a unilateral nasal mass with epistaxis, unlike typical inflammatory polyps which are usually bilateral and non-bleeding. Radiologically, intense contrast enhancement may raise suspicion of vascular tumors or malignancy. Repeated biopsies may be inconclusive due to superficial sampling and bleeding tendency, as observed in our case.

The inferior turbinate is a rare site of origin for angiomatous nasal polyps, with most cases reported from the maxillary sinus or nasal cavity. Complete endoscopic surgical excision with removal of the attachment site is the treatment of choice. Recurrence is rare when complete excision is achieved.

Differential diagnoses include juvenile nasopharyngeal angiofibroma, hemangioma, inverted papilloma, and sinonasal malignancies. Histopathology remains the gold standard for diagnosis.

4. Conclusion

Angiomatous nasal polyp should be included in the differential diagnosis of unilateral, bleeding nasal masses with contrast enhancement on imaging. Awareness of this entity can prevent misdiagnosis and overtreatment. Endoscopic excision with histopathological confirmation offers excellent outcomes with minimal risk of recurrence.

Declarations

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Conflict of Interest: The authors declare no conflict of interest.

Ethical Approval: Not required for a single case report.

Informed Consent: Written informed consent was obtained from the patient for publication of this case report and accompanying images.

Suggested Figures and Tables

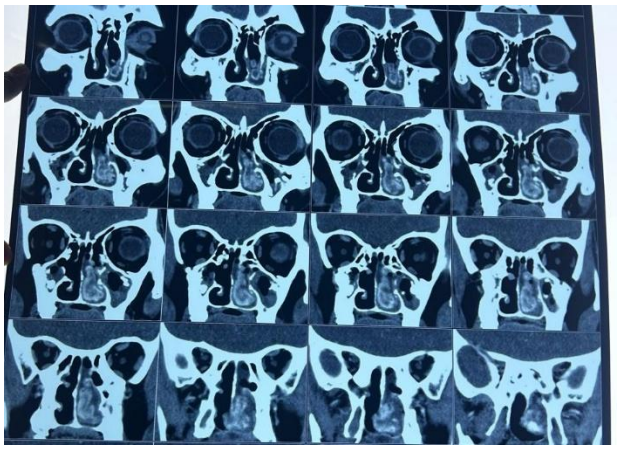

Figure 1: CECT PNS showing contrast-enhancing mass arising from left inferior turbinate

Figure 2: Intraoperative image of excised mass

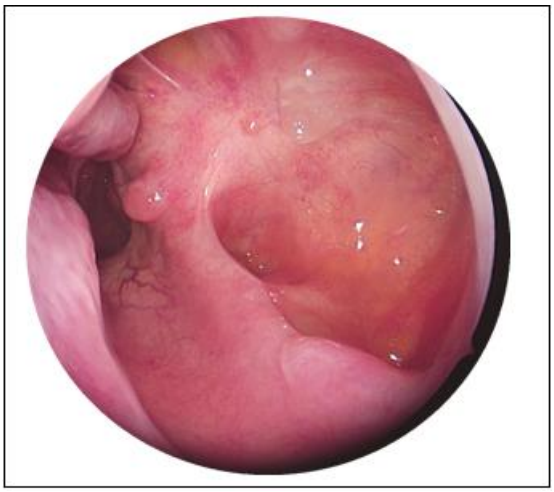

Figure 3: Post op endoscopic image after 3 months

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