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NASAL ANGIOMYXOMA: A RARE DIAGNOSIS WITH COMMON CLINICAL PRESENTATION – A CASE REPORT

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ABSTRACT

Background: Angiomyxoma is an uncommon benign mesenchymal neoplasm characterized by slow growth and a locally infiltrative nature. Although it predominantly arises in the pelvis and perineum, occurrence within the head and neck region is exceptionally rare. Nasal angiomyxoma often presents with nonspecific symptoms that mimic common sinonasal disorders, making early diagnosis difficult.

Case Presentation: A 40-year-old woman presented with progressive left-sided nasal obstruction associated with recurrent episodes of spontaneous epistaxis for four months. Diagnostic nasal endoscopy demonstrated a pinkish vascular mass occupying the left nasal cavity with associated blood clots. Contrast-enhanced computed tomography of the paranasal sinuses revealed a heterogeneously enhancing polypoidal lesion measuring 4.4 × 1.8 × 3.0 cm arising from the left nasal cavity with mild erosion of the adjacent nasal septum. Complete endoscopic en bloc excision was performed under general anaesthesia. Histopathological examination confirmed the diagnosis of nasal angiomyxoma. The postoperative period was uneventful, and the patient recovered satisfactorily.

Conclusion: Nasal angiomyxoma should be considered in the differential diagnosis of persistent unilateral nasal obstruction associated with recurrent epistaxis. Complete surgical excision with histopathological confirmation remains the treatment of choice, while long-term follow-up is essential because of the possibility of local recurrence.

KEYWORDS: Angiomyxoma, Nasal cavity, Epistaxis, Nasal obstruction, Sinonasal tumour, Endoscopic excision

INTRODUCTION

Angiomyxoma is a rare benign soft tissue neoplasm originating from mesenchymal cells. Histologically, it consists of spindle-shaped or stellate cells embedded within a myxoid stroma containing numerous thin-walled blood vessels.[1] Based on its biological behaviour and anatomical location, angiomyxoma has been classified into superficial angiomyxoma and aggressive angiomyxoma. While aggressive angiomyxoma commonly affects women of reproductive age and typically occurs in the pelvis, vulva, perineum, and retroperitoneum, involvement of the nasal cavity and paranasal sinuses is exceedingly uncommon.[2]

Head and neck angiomyxomas account for only a small proportion of reported cases, with the nasal cavity representing one of the rarest sites of occurrence. Because of its rarity and nonspecific clinical presentation, nasal angiomyxoma is frequently mistaken for inflammatory nasal polyps, inverted papilloma, haemangioma, juvenile nasopharyngeal angiofibroma, or other benign and malignant sinonasal tumours.[3]

Patients generally present with unilateral nasal obstruction, recurrent epistaxis, nasal discharge, facial fullness, or anosmia depending upon tumour size and location. Radiological imaging helps determine the extent of disease but cannot reliably distinguish angiomyxoma from other vascular lesions. Therefore, definitive diagnosis relies on histopathological examination following surgical excision.[4]

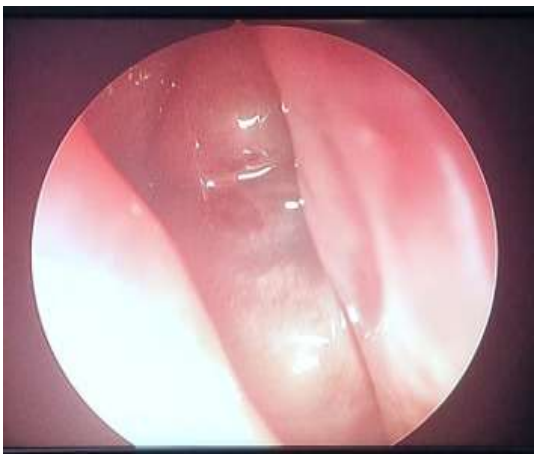
We report a rare case of nasal septal angiomyxoma in a 40-year-old female successfully managed with complete endoscopic surgical excision.

CASE PRESENTATION

A 40-year-old female presented to the otorhinolaryngology outpatient department with complaints of progressive obstruction of the left nasal cavity and intermittent episodes of spontaneous nasal bleeding for four months. The episodes of epistaxis were mild to moderate in severity and resolved spontaneously. She denied any history of fever, headache, facial pain, purulent nasal discharge, hyposmia or anosmia. There was no history of facial trauma, previous nasal surgery, bleeding disorders, anticoagulant use, or systemic illness.

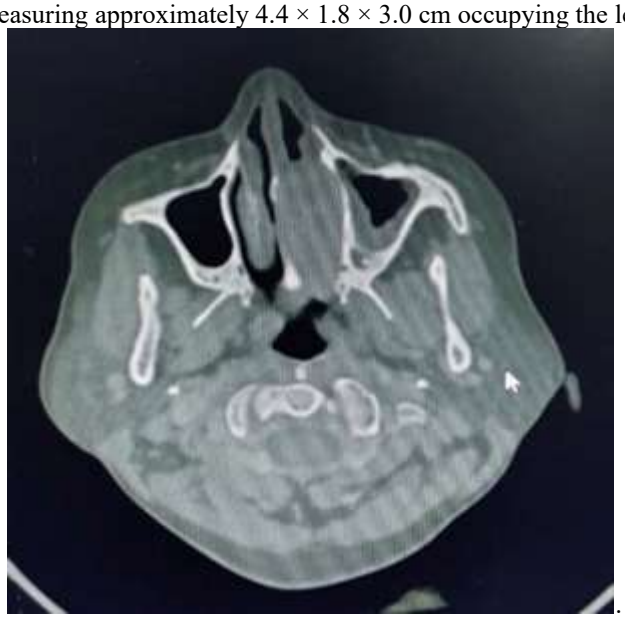
General physical examination was unremarkable. Vital parameters were within normal limits. External examination of the nose revealed no deformity or swelling. There was no cervical lymphadenopathy.

Anterior rhinoscopy demonstrated narrowing of the left nasal cavity due to an intranasal mass. Diagnostic nasal endoscopy revealed deviation of the nasal septum towards the right side and a smooth pinkish fleshy mass occupying the left nasal cavity (Figure 1). Blood clots were observed along the floor of the nasal cavity.



The precise site of origin of the lesion could not be identified because of its size. The lesion appeared vascular and bled on gentle manipulation. Routine laboratory investigations including complete blood count, coagulation profile, renal function tests and biochemical parameters were within normal limits.

Contrast-enhanced computed tomography (CECT) of the paranasal sinuses demonstrated a heterogeneously enhancing polypoidal soft tissue lesion measuring approximately 4.4 × 1.8 × 3.0 cm occupying the left nasal cavity (Figure 2)



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The lesion was closely abutting the nasal septum medially and showed mild erosion of the adjacent septal bone without evidence of extensive destruction or intracranial extension. The remaining paranasal sinuses were unremarkable.

Based on the clinical and radiological findings, provisional differential diagnoses included inflammatory nasal polyp, haemangioma, inverted papilloma, angiomatous polyp, and other benign vascular tumours.

The patient was planned for endoscopic surgical exploration under general anaesthesia. Intraoperatively, the lesion was identified as a fleshy vascular mass arising from the left side of the nasal septum. The tumour bled on manipulation but was well localized. Complete en bloc excision of the lesion was performed using an endoscopic approach with meticulous haemostasis throughout the procedure. The surgical specimen was submitted for histopathological evaluation. (Figure 3)

Gross examination revealed a well-circumscribed soft gelatinous tissue mass. Microscopic examination showed abundant loose myxoid stroma containing numerous thin-walled blood vessels with scattered spindle-shaped and stellate stromal cells. No significant nuclear atypia, increased mitotic activity, or malignant features were identified. These findings were consistent with angiomyxoma arising from the left nasal septum.

The postoperative recovery was uneventful. Nasal packing was removed without complications, and the patient was discharged with advice for regular follow-up. At subsequent outpatient review, the surgical site had healed satisfactorily with complete resolution of nasal obstruction and no evidence of recurrent epistaxis.

DISCUSSION

Angiomyxoma is an uncommon benign mesenchymal neoplasm characterized by abundant myxoid extracellular matrix and a rich vascular network. Although histologically benign, these tumors may demonstrate locally infiltrative behavior depending on the subtype and anatomical location. The World Health Organization classifies angiomyxomas into superficial angiomyxoma and aggressive angiomyxoma, both of which exhibit distinct clinical behavior.[1] Aggressive angiomyxoma predominantly occurs in the pelvis and perineum of women of reproductive age, whereas superficial angiomyxoma is generally found in the skin and subcutaneous tissues. Involvement of the head and neck region is exceedingly rare, accounting for only a small proportion of all reported angiomyxomas, with the nasal cavity representing one of the least frequently affected sites.

The rarity of sinonasal angiomyxoma often leads to delayed diagnosis because its presenting symptoms closely resemble those of more common benign sinonasal diseases. Patients usually present with unilateral nasal obstruction, recurrent epistaxis, nasal discharge, facial pressure, headache, hyposmia, or anosmia depending on the size and location of the lesion. Since these symptoms are non-specific, clinicians frequently consider inflammatory nasal polyps, antrochoanal polyps, inverted papilloma, haemangioma, lobular capillary haemangioma, juvenile nasopharyngeal angiofibroma, schwannoma, fibromyxoma, and even sinonasal malignancies before suspecting angiomyxoma[2,3]. In the present case, the patient presented with unilateral nasal obstruction and recurrent spontaneous epistaxis of four months' duration without constitutional symptoms, which initially suggested a benign vascular lesion or inflammatory pathology rather than a rare mesenchymal tumor.

Radiological imaging plays a pivotal role in evaluating the extent of disease and planning surgical management. Computed tomography is usually the first-line imaging modality because it provides excellent visualization of the bony framework of the sinonasal region. Angiomyxomas typically appear as well-defined or lobulated soft tissue masses showing heterogeneous enhancement following intravenous contrast administration. Mild remodeling or pressure erosion of adjacent bony structures may occasionally be observed, reflecting slow expansile growth rather than aggressive osseous destruction.[4,5] In our patient, contrast-enhanced CT demonstrated a heterogeneously enhancing polypoidal lesion occupying the left nasal cavity with mild erosion of the adjacent nasal septum. Although these imaging findings suggested a vascular soft tissue lesion, they were not sufficiently specific to establish a definitive diagnosis. Magnetic resonance imaging (MRI), when available, may further characterize the lesion by demonstrating low signal intensity on T1-weighted images and markedly high signal intensity on T2-weighted sequences because of the abundant myxoid matrix and high water content. MRI is also useful in assessing the true extent of tumour infiltration, especially in anatomically complex regions.

Definitive diagnosis of angiomyxoma relies on histopathological examination. Microscopically, the tumor is composed of scattered spindle-shaped or stellate fibroblastic cells embedded in a loose myxoid stroma containing numerous thin-walled blood vessels of varying calibers. Cellular atypia, necrosis, and mitotic activity are typically absent, supporting its benign nature. Immunohistochemically, tumor cells commonly express vimentin and CD34, with variable positivity for smooth muscle actin and desmin depending on the subtype. S100 protein is generally negative, helping distinguish angiomyxoma from neural tumors such as schwannoma or neurofibroma. Although immunohistochemistry was not required to establish the diagnosis in the present case due to the characteristic histomorphological findings, it may be valuable in diagnostically challenging cases and for excluding other myxoid soft tissue neoplasms.

The differential diagnosis of nasal angiomyxoma is broad because numerous benign and malignant lesions share similar clinical and radiological characteristics. Inflammatory nasal polyps usually present as pale, insensitive masses and rarely produce spontaneous bleeding. Inverted papilloma often originates from the lateral nasal wall and may exhibit focal hyperostosis on imaging.[6,7] Lobular capillary haemangioma commonly presents with recurrent epistaxis and demonstrates marked vascularity but differs histologically by showing capillary proliferation arranged in lobules. Juvenile nasopharyngeal angiofibroma is a highly vascular tumour almost exclusively affecting adolescent males, making it an unlikely diagnosis in middle-aged women. Myxoid liposarcoma, fibromyxoma, low-grade fibromyxoid sarcoma, and myxoid neurofibroma should also be considered, particularly when atypical imaging or histopathological features are present. Careful clinicopathological correlation is therefore essential for establishing the correct diagnosis.

Complete surgical excision remains the treatment of choice for localized nasal angiomyxoma. Advances in endoscopic sinus surgery have revolutionized the management of benign sinonasal tumors by providing excellent illumination and magnified visualization while minimizing surgical morbidity[7,8]. Endoscopic excision enables precise identification of the tumor origin, facilitates complete removal, minimizes intraoperative blood loss, preserves surrounding normal structures, and shortens postoperative recovery compared with traditional open approaches. In the present case, the lesion originated from the left nasal septum and was successfully removed en bloc through an endoscopic approach with meticulous haemostasis. The postoperative period was uneventful, and the patient experienced complete resolution of symptoms without immediate complications.

Although angiomyxoma is histologically benign, recurrence remains an important clinical consideration. The reported recurrence rate varies depending upon tumor subtype, anatomical location, completeness of excision, and duration of follow-up. Superficial angiomyxomas generally exhibit lower recurrence rates than aggressive angiomyxomas; however, recurrence may still occur if microscopic residual disease remains after surgery. Most recurrences are local rather than metastatic, as distant spread has not been documented. Therefore, complete excision with histologically negative margins, whenever feasible, is essential for minimizing recurrence risk[9,10]. Long-term endoscopic surveillance is recommended because recurrent lesions may remain asymptomatic during their early stages. Periodic clinical examination combined with imaging when indicated facilitates early detection and timely intervention.

The present case contributes to the limited literature on nasal septal angiomyxoma, emphasizing the importance of maintaining a broad differential diagnosis in patients presenting with persistent unilateral nasal obstruction and recurrent epistaxis. Awareness of this rare entity among otorhinolaryngologists, radiologists, and pathologists is essential to avoid misdiagnosis and unnecessary delays in treatment. Histopathological examination remains indispensable for definitive diagnosis, while minimally invasive endoscopic surgery provides excellent therapeutic outcomes with low morbidity. Reporting additional cases will improve understanding of the clinicopathological characteristics, optimal management strategies, and long-term prognosis of this rare sinonasal neoplasm.

CONCLUSION

Nasal angiomyxoma is an exceptionally rare benign tumour that frequently presents with nonspecific symptoms such as unilateral nasal obstruction and recurrent epistaxis. Because these clinical features closely resemble more common sinonasal disorders, diagnosis requires a high index of suspicion along with detailed endoscopic examination, appropriate radiological imaging, and histopathological confirmation. Complete endoscopic surgical excision provides excellent clinical outcomes with minimal morbidity. Long-term follow-up remains important for early detection of recurrence despite the generally favourable prognosis.

PATIENT CONSENT

Written informed consent was obtained from the patient for publication of this case report and accompanying clinical information while maintaining anonymity.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

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REFERENCES

1. Steeper TA, Rosai J. Aggressive angiomyxoma of the female pelvis and perineum. Report of nine cases of a distinctive type of gynecologic soft-tissue neoplasm. Am J Surg Pathol. 1983;7(5):463–475.
2. Sutton BJ, Laudadio J. Aggressive angiomyxoma. Arch Pathol Lab Med. 2012;136(2):217–221.
3. Haldar K, Martinek IE, Kehoe S. Aggressive angiomyxoma: A case series and literature review. Eur J Surg Oncol. 2010;36(4):335–339.
4. Allen PW. Myxoma is not a single entity: A review of the concept of myxoma. Ann Diagn Pathol. 2000;4(2):99–123.
5. Outwater EK, Marchetto BE, Wagner BJ, Siegelman ES. Aggressive angiomyxoma: Findings on CT and MR imaging. AJR Am J Roentgenol. 1999;172(2):435–438.
6. Sylvester DC, Kortequee S, Moor JW, Woodhead CJ, Maclennan KA. Aggressive angiomyxoma of the larynx: Case report and literature review. J Laryngol Otol. 2010;124(7):793–795.
7. Wang Z, Liu Y, Yang L, Gu L, He Y, Huang D, et al. Maxillary aggressive angiomyxoma showing ineffective response to radiotherapy: A rare case report and review of the literature. Int J Clin Exp Pathol. 2015;8(1):1063–1067.
8. Kahn SL, Juhl ME, Sidiropoulos M, Guitart J, Antonijevic S, Krunic AL. Angiomyxoma of the nasal dorsum treated by Mohs surgery. Australas J Dermatol. 2016;57(1):e8–e10.
9. Lloyd G, Lund VJ, Savy L, Howard D. Imaging of lumps and bumps in the nose: A review of sinonasal tumours. Cancer Imaging. 2005;5:167–177.
10. Shinde V, Singla P, Satav A, Jain Y, Gupta S. Angiomyxoma of sinonasal cavity: A case report. Int J Sci Res. 2024;13(4):1538–1540.