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Case Report

Nasal Septal Fibroma Tumor Resection: A Rare Case Report

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Abstract

Fibromas are benign, slow-growing tumors arising from fibrous connective tissue. Although they may occur in various anatomical locations, fibromas of the nasal cavity are uncommon, and origin from the nasal septum is exceptionally rare, with only a few cases reported in the medical literature. We present a rare case of nasal septal fibroma in a 48-year-old male who presented with progressive bilateral nasal obstruction and nasal deformity over several years. Radiological imaging revealed a well-defined septal mass without surrounding tissue invasion. Complete surgical excision was performed through an open dorsal nasal approach. Histopathological examination confirmed the diagnosis of fibroma. Postoperatively, the patient experienced complete symptom resolution with no recurrence. This case highlights the importance of considering benign fibrous tumors in the differential diagnosis of long-standing nasal obstruction.

Keywords: *Nasal septum, Fibroma, Benign nasal tumor, Nasal obstruction, Case report*

Introduction

Benign tumors of the nasal cavity are relatively rare, and among them, fibromas constitute an exceptionally uncommon entity. Fibromas are composed of mature fibrous connective tissue and are characterized by indolent growth and non-invasive behavior. While fibromas have been described in the skin, oral cavity, and paranasal sinuses, involvement of the nasal septum is extremely rare [1,2].

Due to their slow progression and lack of alarming symptoms such as epistaxis or pain, nasal septal fibromas may remain undiagnosed for years. Patients typically present late, when the lesion becomes large enough to cause nasal obstruction or external nasal deformity. Given the potential for malignant tumors in the sinonasal region, accurate diagnosis and timely management are essential.

Etiology and Pathogenesis

The exact etiology of nasal septal fibromas remains uncertain. Chronic irritation and prolonged inflammatory stimulation are believed to play a role in their development. Proposed contributing factors include:

- Chronic exposure to dust and chemical irritants
- Repeated minor nasal trauma
- Long-standing mucosal inflammation

In the present case, the patient's occupation as a farmer likely resulted in prolonged exposure to environmental irritants, which may have contributed to tumor formation.

Clinical Appearance

Nasal septal fibromas typically present as firm, gray-white, smooth-surfaced masses, covered by intact mucosa. They are generally non-bleeding and non-ulcerated. Large lesions may distort normal nasal anatomy and cause widening of the nasal dorsum (Figure 1).

Case Report

Patient History

A 48-year-old male farmer presented with progressive bilateral nasal obstruction over the past 2–3 years. The obstruction gradually worsened and was associated with a noticeable widening of the nose, leading to cosmetic deformity (Figure 1).

There was no history of epistaxis, weight loss, facial pain, or severe headache. The patient reported mouth breathing and snoring but had never sought medical consultation for his nasal symptoms or deformity.

Figure 1. Preoperative clinical photograph showing widening of the nasal dorsum and external nasal deformity caused by a large nasal septal mass.

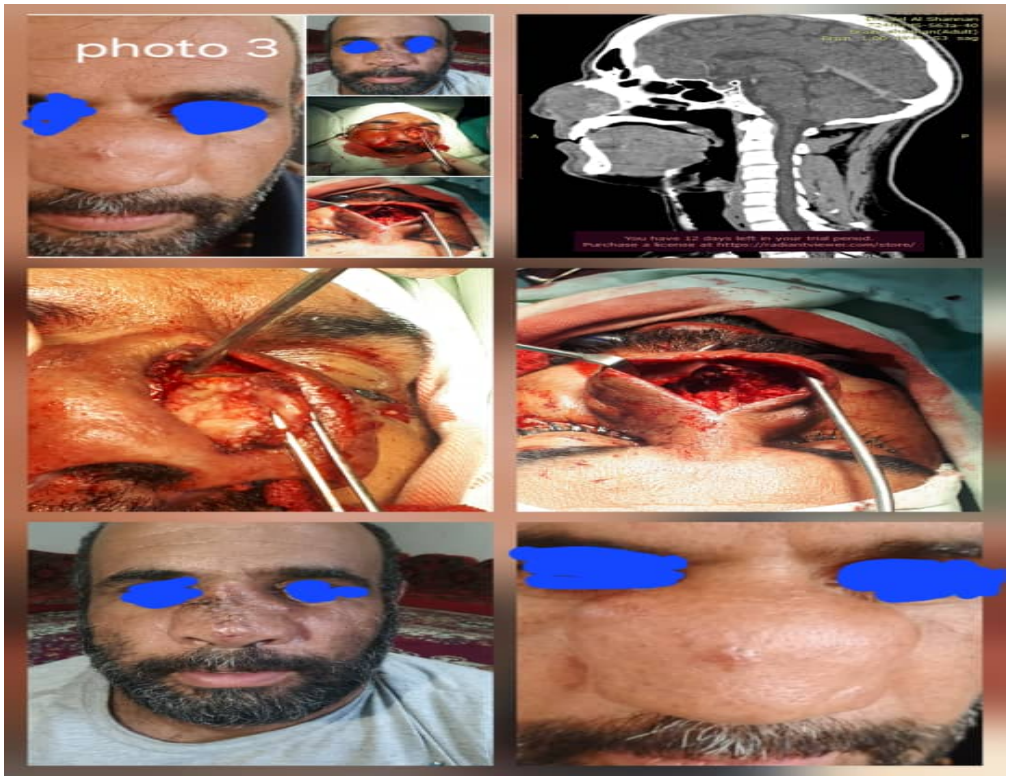

Figure 2. CT/MRI axial and sagittal views demonstrating a well-defined, homogeneous, dense rounded mass (3–4 cm) arising from the nasal septum, without invasion of surrounding structures

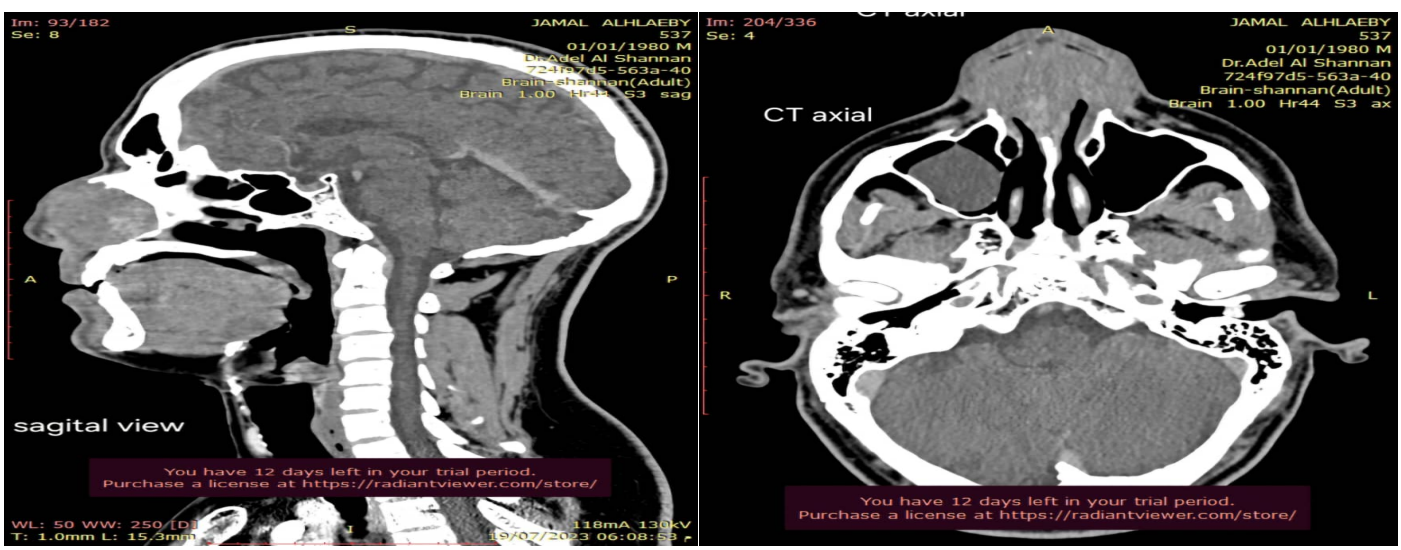

Figure 3. Histopathological image showing dense fibrous connective tissue with spindle-shaped fibroblasts, confirming the diagnosis of nasal septal fibroma

Clinical Examination

On examination, the patient exhibited:

- Broad and widened nasal dorsum
- Complete bilateral nasal obstruction
- A large, firm, non-tender septal mass bulging into both nasal cavities
- Intact overlying nasal mucosa

Anterior rhinoscopy confirmed the septal origin of the lesion.

Radiological Findings

Computed tomography (CT) and magnetic resonance imaging (MRI) revealed a well-defined, homogeneous, dense rounded mass measuring approximately 3–4 cm, arising from the nasal septum. The lesion showed no evidence of bone destruction or invasion of surrounding nasal structures (Figure 2). Axial and sagittal views supported the benign and non-infiltrative nature of the tumor.

Treatment

Complete surgical excision was planned due to the size of the tumor, bilateral nasal obstruction, and associated deformity. An open dorsal nasal approach was chosen to allow adequate exposure and complete removal. The mass was excised in total, and nasal contour was restored. Lateral rhinotomy remains an alternative approach for similar lesions.

Histopathological Findings

Gross pathological examination revealed multiple tissue fragments, with the largest measuring approximately 4 cm, displaying a white, firm, fibrotic appearance on cut section.

Microscopic examination demonstrated a well-demarcated nodular lesion composed of hypocellular spindle cells arranged within dense collagen bundles. The spindle cells exhibited elongated or twisted nuclei without evidence of nuclear atypia or mitotic activity. Scattered small vascular channels and focal calcifications were also noted. No features suggestive of malignancy were identified.

Based on these findings, the lesion was reported as compatible with a benign solitary fibrous tumor (fibroma) of the nasal septum. Clinicopathological correlation was advised, and immunohistochemical staining was recommended if required for further confirmation.

Postoperative Outcome

The postoperative course was uneventful. The patient experienced complete resolution of nasal obstruction and significant cosmetic improvement. No recurrence was noted during follow-up.

Discussion

Nasal septal fibromas are exceedingly rare benign tumors. Their slow growth and absence of aggressive symptoms often lead to delayed diagnosis. The differential diagnosis of septal masses includes inflammatory polyps, hemangiomas, papillomas, chondromas, and malignant tumors.

Radiological imaging plays a crucial role in assessing lesion extent and excluding invasive behavior; however, histopathology remains the definitive diagnostic modality. Complete surgical excision is curative in most cases and is associated with excellent prognosis.

Conclusion

Fibromas arising from the nasal septum are extremely rare benign tumors. Despite their non-aggressive nature, they may cause significant functional and cosmetic impairment if left untreated. Thorough clinical evaluation, radiological imaging, and histopathological confirmation are essential for accurate diagnosis. Surgical excision provides definitive treatment with excellent outcomes.

References

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