

Mucocele of the Nasal Septum : Case Report and Review of the Literature

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Mucoceles are relatively common cystic lesions of the paranasal sinuses. However, mucocele of the nasal septum is extremely rare. We report a case of a mucocele present in this unusual location. Mucocele of the nasal septum should be considered in the differential diagnosis of a mass of the nasal septum and/or median canthal region. Nasal septal mucocele can be effectively treated with endoscopic marsupialization or complete excision.

KEY WORDS: Mucocele · Nasal septum · Endoscopic surgery.

INTRODUCTION

Mucoceles are relatively common lesions of the paranasal sinuses. The most common site of occurrence is in the frontal sinus.^{1,2)} However, mucocele of the nasal septum is extremely rare. To the best of our knowledge, 4 cases of nasal septal mucocele have been reported in the English literature.²⁻⁵⁾ Herein, we present an additional case of mucocele of the nasal septum with a review of the literature pertaining to this condition.

CASE REPORT

A 52-year-old woman presented with several months history of headache. The patient underwent brain magnetic resonance imaging (MRI) at local hospital. On MRI, the left nasal septal mass was detected and the patient was referred to our hospital. The patient had no nasal symptoms, such as nasal obstruction, anosmia, and nasal pain. The patient also had no history of nasal surgery and facial trauma. Nasal endoscopic examination showed a submucosal mass on the left nasal septum (Fig. 1). Computed tomog-

raphy (CT) with enhancement of the paranasal sinuses revealed a 1.5 cm sized high attenuated and non-enhancing cystic mass on the left nasal septum with bony remodeling

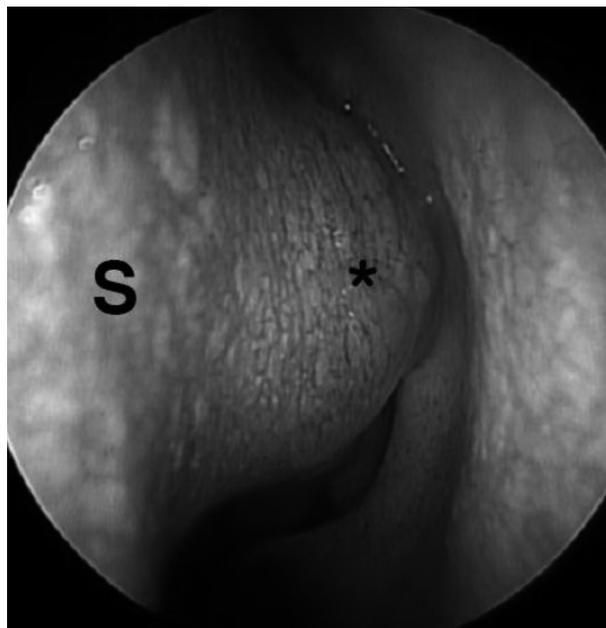


Fig. 1. Endoscopic examination shows a submucosal mass (asterisk) on the left nasal septum (S).

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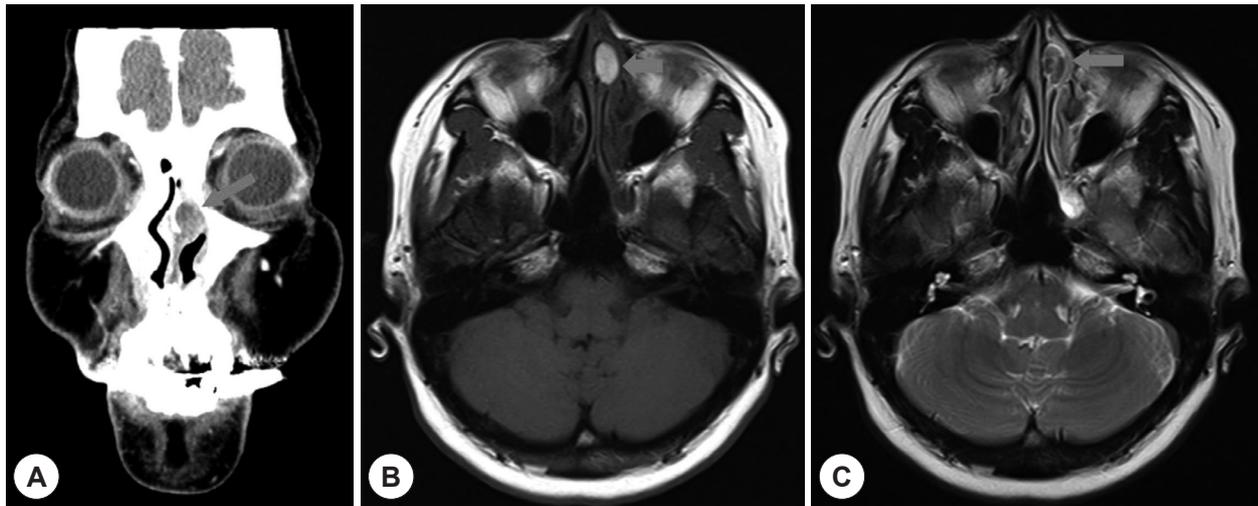


Fig. 2. Enhanced CT of the paranasal sinuses (A) revealed a 1.5 cm sized high attenuated cystic mass (arrow) in the left nasal septum. On MRI, a mass (arrow) on the left nasal septum had high signal on T1-weighted image (B) and low signal on T2-weighted image (C), suggesting a mucocele.

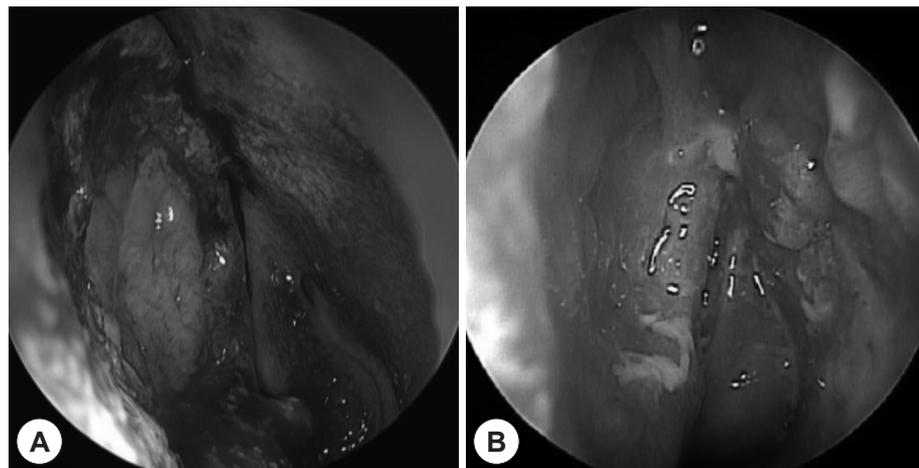


Fig. 3. (A) Intraoperative appearance of left nasal cavity following endoscopic marsupialization (B) At 3months' follow up, endoscopic examination shows a well marsupialized cavity on the left nasal septum.

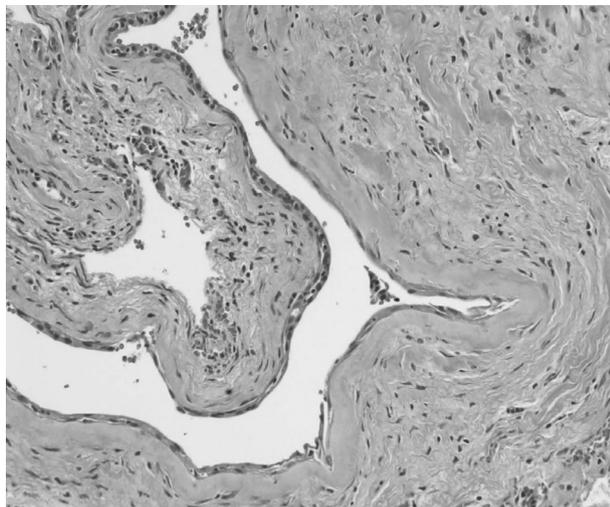


Fig. 4. Histopathologic examination shows that a cyst is lined by low cuboidal epithelium and little inflammatory cells (Hematoxylin & Eosin staining, $\times 200$).

(Fig. 2). On MRI, the mass had high signal intensity and low signal intensity on T1-weighted and T2-weighted images, respectively (Fig. 2).

The preoperative diagnosis was a mucocele of the left nasal septum. The patient underwent endoscopic surgery. After the incision on the septal mucosa by knife, yellowish, purulent secretion was drained. The cystic lesion was widely marsupialized by microdebrider. The endoscopic surgery was ended without using the packing materials or silastic sheet (Fig. 3). The histopathologic examination of the cystic lesion of the nasal septum was consistent with mucocele. The postoperative course was uneventful (Fig. 4). At 3 months' follow-up, the patient was free of lesions during follow-up (Fig. 3). Sixteen months postoperatively, the patient was followed up by telephone and reported no recurrence and headache.

Table 1. Summary of previously reported cases with nasal septal mucocele

Cases (n=5)	Age/ Gender	Presenting symptoms	Facial appearance	Endoscopic findings	Treatment outcome	Complication	Follow-Up (Months)
Gall <i>et al.</i> ¹⁾	62/M	Bilateral NO	Swelling at the lateral border of the nose and medial canthus	Bilateral septal swelling	Endoscopic marsupialization (NED)	None	2
Lei <i>et al.</i> ²⁾	37/M	Increasing nasal mass and pain	Nasal mass	Bilateral bulging of upper septum	Endoscopic excision (NED)	None	10
Taskin <i>et al.</i> ³⁾	45/M	Bilateral NO	Swelling at the medial canthus	bilateral swelling of the septum	Endoscopic excision (NED)	None	ND
Friedmann <i>et al.</i> ⁴⁾	32/M	Bilateral NO	Widening of the nasal vault and dorsum	Bilateral submucosal septal mass	Endoscopy assisted external approach and excision (NED)	ND	ND
Present case	52/F	Headache	NS	Unilateral swelling of the septum	Endoscopic marsupialization (NED)	None	16

NO: nasal obstruction, NS: nonspecific, NED: no evidence of disease, ND: not described

DISCUSSION

Paranasal sinus mucoceles arise from sinus ostial obstruction, or blockage of the duct of a minor salivary gland within the sinus lining and rarely, sequestration of nasal or sinus mucosa at the time of facial trauma or surgery.^{2,4,6)} The frontal sinus is the most common site for mucoceles, followed by the ethmoid, maxillary and sphenoid sinuses.⁶⁾ The mucocele of the nasal septum is extremely rare and only few cases have been reported in the English literature (Table 1).²⁻⁵⁾ The etiology of mucocele is not established. Previous nasal surgery, chronic inflammation and infection, allergic diseases, benign and malignant lesions, and facial traumas are all possible causes of mucoceles.^{4,7)}

Most paranasal sinus mucoceles are asymptomatic for many years until compression and expansion to the neighboring structures.⁴⁾ Symptoms of mucocele are related to their expansion and pressure on nearby structures.⁸⁾ In this review of the mucocele of nasal septum, the most common symptoms was bilateral nasal obstruction. Both sides of nasal obstruction were result of bilateral swelling of nasal septum.³⁾ In our case, the patient presented with headache without nasal symptoms. The relative small size of the mucocele in our case led to absence of nasal symptoms and headache in our case may be incidental. Our review showed that most patients with septal mucocele presented as a mass on the nasal dorsum and/or medial canthus, which suggests that septal mucocele is usually detected with a large mass.

The tentative diagnosis of nasal septal mucoceles is made

on clinical and imaging findings. Nasal endoscopic examination reveals a submucosal mass on the nasal septum. Imaging modalities, such as CT and MRI, may aid in the preoperative diagnosis and provide useful information about the location, size, and relation to surrounding structures. Mucocele of nasal septum should be differentiated from a neurofibroma, dermoid, meningocele, inverted papilloma, adenoid cystic carcinoma, plasmacytoma, lymphoma, schwannoma, infections and nasal foreign body.^{3,4,9)} because septal mucocele cause not only nasal symptoms, but also facial contour changes around the nasal bone and medial canthus. Biopsy from a mass confirms clinical diagnosis of nasal septal mucocele.

The ideal treatment for mucocele of the nasal septum is complete excision, but marsupialization can be effective alternative in most cases. Although external approach can be chosen initially, endoscopic approach has an advantage for easy access to the affected lesion, perfect visualization, low morbidity and low complications^{3,4)} and then, our preferred treatment method for nasal septal mucocele is endoscopic marsupialization. In our review of reported cases, all patients underwent endoscopic surgery only or endoscopy assisted external surgery and had good surgical outcome.

In conclusion, we experienced a case of nasal septal mucocele which is present in very unusual location. Mucocele of the nasal septum should be included and considered in the differential diagnosis when we encounter a mass on the nasal septum and/or median canthus. Endoscopic marsupialization is a feasible surgical method in treatment of nasal septal mucocele.

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