A Giant Mucocele of Nasal Septum: Case Report and Literature Review

Nazal Septumun Dev Mukoseli: Olgu Sunumu ve Literatür Taraması

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Özet

Mukoseller paranazal sinüslerin, benign, kistik ve destrüktif lezyonlarıdır. Çoğunlukla fronto-etmoidal sinüslerde görülen bu lezyonların nazal septumda görülmeleri çok nadirdir. Literatürde henüz 5 nazal septum mukoseli olgusu bildirilmiştir. Bizim sunduğumuz dev mukosel bildirilen 6. nazal septum mukoseli olgusudur. Ayrıca burun tıkanıklığı, burunda ağrı ve baş ağrısı şikayeti olan hastalarda nazal septum mukoseli ayırıcı tanı açısından akılda tutulmalıdır. Nazal septum mukosellerinin sinus mukosellerine oranla daha benign mukoseller oldukları ve erken tanı konulduğunda marsupializasyon veya total eksizyon ile başarılı ve güvenli bir şekilde tedavi edilebildiği bilinmelidir.

Anahtar Kelimeler

Mukosel; Nazal Septum; Cerrahi; Pnömatosel

Abstract

Mucoceles are benign, cystic and destructive lesions of the paranasal sinuses. They occur most commonly in the fronto-ethmoidal sinuses and extremely rare in nasal septum. To our knowledge, there was 5 case of mucocele of the nasal septum reported in the literature and we present a giant mucocele of the nasal septum case as 6th case. In addition, when a patient presents with nasal obstruction, nasal pain and headache, a mucocele of the nasal septum should be born in mind with respect to differential diagnosis. Also, clinicians should know that, mucoceles of the nasal septum are relatively benign entities compared to the other mucoceles of the nasal cavity and paranasal sinuses. They can be successfully and safely treated with marsupialization or total excision, if they are early diagnosed.

Keywords

Mucocele; Nasal Septum; Surgery; Pneumatocele

DOI: 10.4328/JCAM.1885 Received: 08.05.2013 Accepted: 20.05.2013 Printed: 01.09.2013 J Clin Anal Med 2013;4(suppl 1): 1-3
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Introduction

Mucoceles are benign, expansile chronic cystic lesions of the paranasal sinuses that can define pathologically as encapsulated, mucoid filled masses. Rarely, they have been occurred in unusual localization of the craniofacial structures [1-3]. Mucocele of the nasal septum (MSN) is extremely rare and first reported in 2002 by Gall and Witterick [4] and 5 cases have been reported so far in the literature [4-8]. The aim of the present paper is to report, to our knowledge, sixth case of a giant MSN developed from a septal pneumatocele and to review the literature regarding etiology, clinical implications and management.

Case Report

A 34-year-old male presented with 6-months history of bilateral nasal obstruction, rhinorrhea and nasal discharge. Clinical examination by anterior rhinoscopy revealed a septal swelling. Nasoendoscopy showed that the submucosal septal swelling obstructed nasal cavity bilaterally and it was more prominent on the left side. Septal mucosa was intact on both sides (Figure 1). He had a history of rhinoplasty without septoplasty 15 years

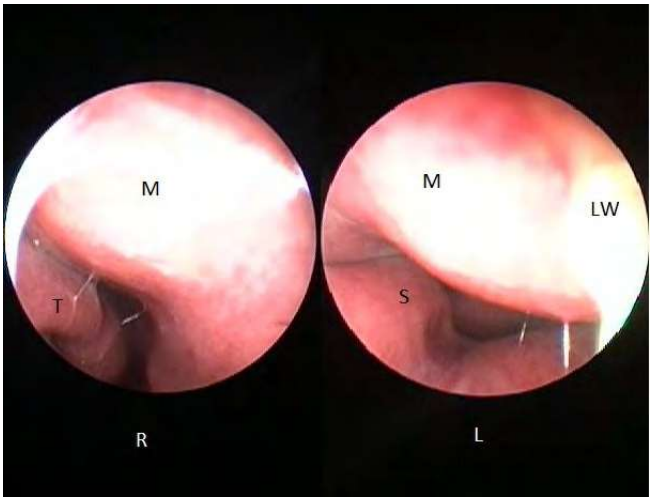


Figure 1. Endoscopic view of the MSN in both nasal cavities, T; right inferior turbinate, M; mucocele, S; septum, LW; lateral nasal wall of left nasal cavity.

ago. Computerized tomography (CT) scan demonstrated a mass with soft tissue density with smooth clear-cut margins isodense with brain tissue (Figure 2). Eighteen cc mucoid fluid from the cyst drained via syringe for histopathologic examination. Mucus cell block with sparse polymorphonuclear leukocytes were found in the sample, and these findings was compatible with mucocele.



Figure 2. Coronal and axial CT scans showing MSN and destruction of lateral nasal wall and nasal bone

An operation was performed under local anesthesia starting with right hemitransfixion incision similar to septoplasty. Anterior wall of the pneumatocele has been made visible with bilateral mucoperiostal elevation. Although, lateral walls were eroded by mucocele, other parts of the bone wall of the expanded pneumatocele were intact (superior, inferior, anterior and posterior parts). The giant mucocele and pneumatocele were dissected from septal mucosa and successfully removed by endoscopical approach without marsupialization and without external approach (Figure 3). No mucosal damage is seen after

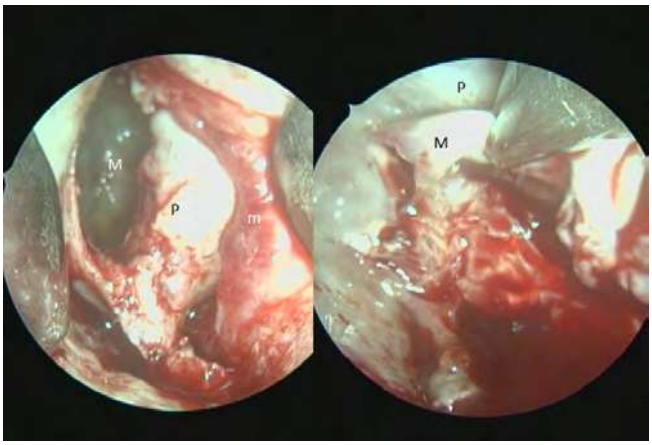


Figure 3. Intraoperative appearance of anterior wall of pneumatocele and dissection of MSN in septoplasty cavity, M; mucocele, P; bone wall of the giant pneumatocele, m; dissected septal mucosa,

the procedure. Bilateral internal nasal splint was placed in the nasal cavity and supported by nasal pack. Nasal pack was taken after two and plates were taken after seven days. The lesion was diagnosed as mucocele. During the 6-month-follow-up, the functional and cosmetic results were excellent (Figure 4).

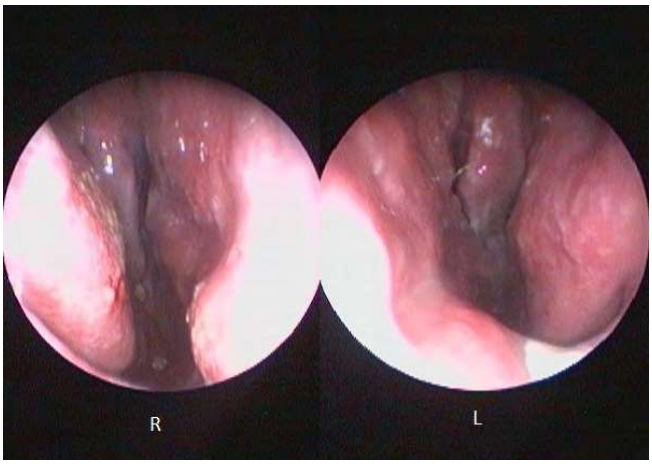


Figure 4. Endoscopic view of healthy nasal cavities in 6 months after surgery.

Discussion

Paranasal mucoceles predominantly develop in the frontal sinuses (60%), followed in frequency by the ethmoidal, maxillary, and sphenoid sinuses, respectively. Some less common and unusual sites for mucoceles have been reported such as orbital floor, root of the nose, pterygomaxillary space and middle tur-

Table 1. Clinic profiles of reported cases, * these diameters was not specified in their papers and they are approximate values obtained by CT images

Case	Age / Gender	Duration	Symptom	Etiology/Cause		Localization	Size	Treatment	Follow-Up/ Recurrence
				Nasal Trauma or Surgery	Other				
Gall R, 2002	62/M	12 months	Nasal obstruction Nasal pain Headache	Nasal surgery with septoplasty 20-30 years ago	No	Midline Superior	~20-30mm*	Endoscopical approach Drainage Marsupialization	2 months /No
Hermann P, 2002	54/F	3 months	Orbital pain Nasal discharge	Sinus surgery without septoplasty Two times 40 and 45years ago	No	Midline	~20mm*	Endoscopical approach Partial Excision Marsupialization	Unknown /Unknown
Lei L, 2004	37/M	3 months	Nasal pain	Suspected foreign body reaction (without foreign body)	Pneumatocele	Posterosuperior	18 mm	Endoscopical approach Partial Excision Marsupialization	10 months / No
Yılmaz MS, 2011	13/M	12 months	Nasal obstruction Nasal pain Headache	No	Pneumatocele	Midline	~20mm*	Endoscopical approach Total excision	6 months / No
Taşkın U, 2012	45/M	6 months	Nasal obstruction Anosmia Snoring Headache	No	Pyocele	Posterosuperior Anterosuperior	~30mm*	Endoscopical approach Total excision	Unknown / No
Aynali G, Present Case	34/M	6 months	Nasal obstruction, Rhinorrhea Nasal discharge	Rinoplasty without septoplasty 15 years ago	Pneumatocele	Midline Superior	40 mm	Endoscopical approach Total excision	6 months / No

binate in a concha bullosa[1-3]. MSNs are the extremely rare mucoceles and first reported in 2002 by Gall and Witterick [4]. In the literature 5 cases have been reported so far (Table 1) [4-8]. The etiologies are not well known and obstruction of the ostiums, facial traumas, previous nasal surgery, recurrent infections and allergies are possible causes for sinus mucoceles [1-3]. Traumas and pneumatoceles were seen as most common etiologic factors for MSN. Trauma can be surgical, such as nasal surgery with or without septoplasty and non-surgical such as foreign body. The common feature of surgeries was that they were performed many years ago (15-45 years) [4-8].

Paranasal mucoceles predominantly develop in the frontal sinuses. Paranasal mucoceles are benign lesions with the potential for adjacent bony remodeling and resorption. They have a slow growing pattern but they can destroy neighboring structures by compression and expansion. They can take many years for them to become symptomatic [1-3]. MSN tend to occur in the superior region of the septum especially in midline. Furthermore, they tend to cause no symptoms until its diameter reaches about 20-40 mm, although occasionally they cause headache, nasal pain and obstruction. MSN are usually diagnosed before destroying the surrounding tissues, due to the relatively early symptomatic because of anatomic localization. CT and Magnetic Resonance Image scan shows a round mass on nasal septum with or without pneumatocele [4-8].

All reported cases have been successfully treated via surgery with endoscopical approach. Gall et al, Hermann et al and Lei et al [4-6] performed partial excision and marsupialization in their cases. Yılmaz et al and Taşkın et al [7,8] reported that MSN totally excised. There was no reported complication or recurrence after treatment in literature for MSN. Similarly, we endoscopically dissected the MSN from the wall of pneumatocele and septal mucosa and the lesion successfully removed totally and performed septoplasty. During the 6-month-follow-up, the functional and cosmetic results were excellent.

In conclusion, MSN is extremely rare entity. To our knowledge, there was 5 MSN cases reported in the literature and we present a giant MSN case as 6th case. In addition, when a patient presents with nasal obstruction, nasal pain and headache, a MSN should be born in mind with respect to differential diagnosis. Also, clinicians should know that, MSNs are relatively benign mucoceles of the nasal cavity. They can be successfully and safely treated with marsupialization or total excision, if they were early diagnosed.

Competing interests

The authors declare that they have no competing interests.

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How to cite this article:

Aynali G, Sivrice ME, Ünal F, Doğan M, Ünlü EN, Yarıktaş M. A Giant Mucocele of Nasal Septum: Case Report and Literature Review. J Clin Anal Med 2013;4(suppl 1): 1-3.