



Inferior Concha Bullosa with Bilaterally Concha Hypertrophy

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ABSTRACT

Inferior concha bullosa is an extremely rare anatomic malformation. Unlike other turbinates of the nasal cavity inferior turbinate is a separate bone. Although inferior concha bullosa is generally asymptomatic and diagnosed incidentally by computed tomography. Nasal obstruction, headache, epiphora, rhinorrhoea, and dysosmia are some of the possible symptoms. We report the case of a 37- year- old white woman with right inferior concha bullosa and bilaterally inferior turbinate hypertrophy. We discuss and report this rare condition under literature.

Key words: Concha bullosa, pneumatization, inferior turbinate

Bilateral Konka Hipertrofisi İle Birlikte Inferior Konka Bulloza

ÖZET

Inferior konka bulloza oldukça nadir görülen bir anatomik malformasyondur. Nazal kavitedeki diğer konkaların aksine inferior konka ayrı bir kemikten gelişir. Genellikle asemptomatik olup insidental olarak bilgisayarlı tomografi ile tanı alırlar. Burun tıkanıklığı baş ağrısı epifora, rinore, disosmi bazı muhtemel semptomlardır. Bu yazıda, sağ alt konka bulloza ve bilateral alt konka hipertrofisi olan 37 yaşında bir bayan hasta bildirilmiş. Ayrıca nadir görülen bu olgu literatür bilgileri eşliğinde tartışılmıştır.

Anahtar kelimeler: Konka bulloza, pnömatizasyon, inferior turbinate

INTRODUCTION

There are generally three nasal turbinates at both sides of the nasal cavity (1). Occasionally, supreme turbinates can be seen at the upper part of the superior turbinates. Supreme, superior and middle turbinate are parts of the ethmoid bone, but the inferior turbinate is a separate bone (1). Pneumatized turbinate (concha bullosa) refers to the presence of an air cell within a nasal turbinate. Pneumatization of the middle turbinate is one of the common anatomical variations and termed concha bullosa. Although this entity is a normal variant, it may result in complications in a minority of patients (2). Pneumatization of the inferior turbinate is extremely rare and it also may result in complications.

CASE

We report a case of a 37- year- old white woman who presented with nasal obstruction. Anterior rhinoscopic and endoscopic examination revealed bilateral inferior turbinate hypertrophy. There was no mass and no discharge on physical examination. Coronal computed tomography (CT) of the nose and paranasal sinuses revealed right inferior concha bullosa and bilateral inferior turbinate hypertrophy (Figure 1). We offered operation but patient did not accepted any kind of surgery including out fracture, and radiofrequency. Nasal steroid treatment administered twice daily to reduce concha volume. Patient did not return for follow up after treatment.

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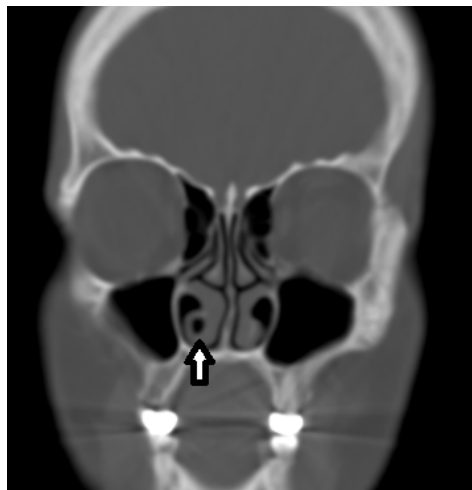


Figure 1. Coronal CT scan shows pneumatization of the right inferior turbinate (arrow)

DISCUSSION

Variations of the nasal cavity are very important for otolaryngologists, especially in functional endoscopic sinus surgery. Since the development of endoscopic techniques and coronal CT scans, even subtle bony anatomical variations of the paranasal sinuses can readily be identified. Although inferior concha bullosa is generally asymptomatic and diagnosed incidentally by computed tomography nasal obstruction, headache, epiphora, rhinorrhoea, and dysosmia are some of the possible symptoms (2). In 1995, Namon(3)described a case of enlargement of an inferior turbinate resulting from what he considered to be a mucocele in that turbinate. The first indubitable case of pneumatization of inferior turbinates were reported by Dogru et al (4) a patient who had referred due to headache and nasal obstruction related to pneumatization of the inferior turbinate had symptomatic relief after surgery. Dawlaty (5)in 1999 reported two cases with pneumatization of the inferior turbinates and one of them was bilateral. Additional cases were published recently by Cankaya et al. (6)and Aydin et al. (7) in 2001 and by Ozcan et al. (8), Sarna et al. (9), and Unlu et al. (10) in 2002. Yang et al. (11) reported 16 patients with pneumatization of inferior turbinates in a retrospective radiological study. We know that clinically, it is impossible to distinguish pneumatization of the inferior turbinate from inferior turbinate hypertrophy without CT. In our case we used

CT scan after endoscopic examination to evaluate nasal structures. Although the characteristics of middle concha bullosa have been adequately evaluated, the mechanism of the formation of inferior concha bullosa is not fully explained in the literature (12, 13). Surgical treatment options for symptomatic inferior concha bullosa are; out fracture of the inferior turbinate, resection of the lateral lamella of the bullous inferior turbinate, or submucous resection. There are also some reports of inferior concha bullosa accompanied by bilaterally or unilaterally middle concha bullosa which treated with resection of the lateral lamella of the bullous middle turbinate, resulting in significantly improved nasal breathing (2).

According to our knowledge, pneumatization of the inferior turbinate is a rare condition. It may be symptomatic or a coincidental radiological finding. It may also be associated with inferior turbinate hypertrophy or allergy. Coronal and axial CT of the nasal and paranasal sinuses is essential in confirming the diagnosis of this condition. We report this case because we think new retrospective radiological studies can show us that condition may not as rare condition as known. Long term follows of these patients and changes of patient's complaints can lead us to develop a general treatment consensus.

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