Case Report (Olgu Sunumu)

Firstly Described a Rhinolith Case in an Aerated Middle Nasal Turbinate

İlk Kez Tariflenen Bir Konka Bülloza Rinoliti Olgusu Eşliğinde Rinolitlerin Tartışılması

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Özet

Rinolit çocuk ve gençlerde nadir görülen bir burun içi kitledir. Baş ağrısı ve aralıklı burun tıkanıklığı şikâyetleri ile polikliniğe başvuran 55 yaşındaki kadın olgunun değerlendirilmesidir. Olgunun nazal endoskopisinde normal görünümlü mukoza ile kaplı sol hipertrofik orta konka saptandı. Olgu önerilen endoskopik sinüs cerrahisi ile orta türbinektomiyi reddetti ve takiplerine gelmedi. Burun içerisinde görülen kitlelerin ayırıcı tanısında rinolit göz önüne alınmalı ve radyolojik incelemenin önemi (özellikle bilgisayarlı tomografi) ve ayrıca kulak-burun-boğaz rutinin fizik muayenesi unutulmamalıdır.

Anahtar Kelimeler: Rinolit,Orta turbinat

Abstract

Rhinolith is an uncommon nasal mass in children and adolescents. In a case where a 55-year-old woman went to polyclnic with headache and intermittent nasal obstruction complaints, normal-appearing hypertrophic left middle concha covered with mucosa was determined in the nasal endoscopy. The patient denied the middle turbinectomy with endoscopic sinus surgery recommended for the case and did not show up for the follow-ups. Rhinolith must be considered at differential diagnosis of masses observed in nasal structures and significance of radiologic inspection (especially computed tomography)should not be forgotten as well as the routine physical examination of otorhinolaryngology

Key Words: Rhinolith,Middle Nasal Turbinate

NTRODUCTION

Rhinolith, currently a rare condition, is mineralized foreign bodies resided in the nasal cavity, which are generally incidentally identified. This condition was most frequently observed in children, who pushed small objects, small stones, coins etc. to their nostrils as a game, and people with mental disabilities (1, 2).

Traumas, surgical operations and dental procedures, intranasal treatment materials and residual ointment can also cause rhinolith development. Consequently, rhinolith may also spontaneously occur through mineral aggregation following the secretion aggregation in long-term chronic polypoid sinusitis (1).

In parallel with the changes in its dimension, rhinolith has symptoms such as unilateral rhinorrhoea, consecutive sinusitis with or without purulent rhinitis, facial pain, headache, epistaxis, nasal respiratory insufficiency which may result in total obstruction, dacryocystitis, otorrhoea, nasal malodor, anosmia, palatal perforation, and septal perforation (1).

Although diagnosis is generally based on anamnesis and endoscopic findings, screening methods can provide diagnostic and/or more information at times (1).

We present a unique case of a patient with concha bullosa rhinolith which was incidentally determined by paranasal computed tomography.

CASE REPORT

In a case where a 55-year-old woman went to polyclnic with headache and intermittent nasal obstruction complaints, normal-appearing hypertrophic left middle concha covered with mucosa was determined in the nasal endoscopy. Left middle concha bullosa (Figure 1) containing rhinolith in coronal computed-tomography sections of the sinuses and mild sinusitis in the right maxillary were observed. The patient denied the middle turbinectomy with endoscopic sinus surgery recommended for the case and did not show up for the follow-ups.

DISCUSSION

Calcific foreign body in nose was first defined in an article published by Bartholini in 1654 (3, 4). Since then, more than 600 cases were reported in the literature (4, 5).

Its prevalence is approximately 1 in every 10.000 ENT patients (4). It generally occurs in halfway between the front and back parts of the nostrils in nasal base (5). In most of the cases, rhinolith occurs in lower nasal meatus (3).

However, in our case it resided in concha bullosa in a localization which was never defined before.

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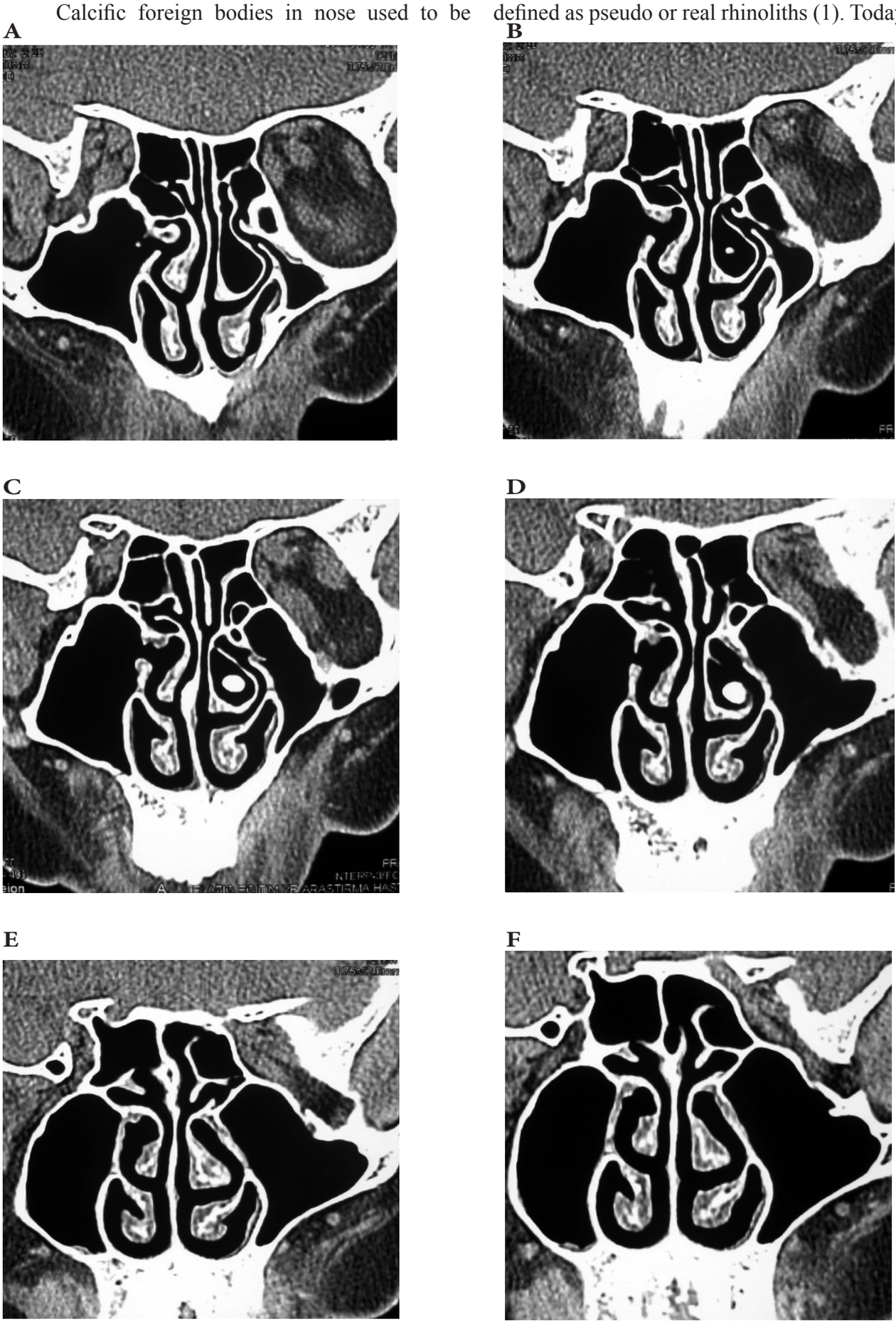
Geliş Tarihi : 24.01.2017
Kabul Tarihi : 08.03.2017

DOI: **10.17517/ksutfd.287810**

Figure 1. ***At coronal 3 mm thick anteroposterior consecutive computed-tomography sections (A-F), concha bullosa is observed in left middle turbinate; it is substantially surrounded by air and gives a dense rhinolith appearance associated with the wall at a small section***

Calcific foreign bodies in nose used to be defined as pseudo or real rhinoliths (1). Today, these



terms are replaced with exogenous or endogeneous depending on the origin of the nucleus on which encrustation occurs (1). Rhinoliths are considered exogenous if nidus are nonhuman material such as piece of paper, seeds, hasps, seeds and grains of vegetables/pulse, beads, parts of toys, impression material, pieces of sand/stone, etc. while they are considered endogenous if they encrustation occurs areound normal or abnormal body tissues such as displaced tooth or teeth, dried pus, desquamated epithelium, sequestrum, mucus, pieces of bone, or blood clot (1).

Although foreign bodies are reported to enter through choana during vomiting or coughing, most of these bodies enter into front nostrils (4, 5). Endogenous based nidus are rarely followed (20%).

The reason why we thought that the rhinolith in our case is endogenous based is that it resides in a location where exogenous access is difficult.

Rhinoliths are almost always unilateral; however, it is possible to determine a bilateral rhinolith rarely (1, 5).

Rhinolith development still cannot enlighten the pathogenesis completely. Below-mentioned four conditions are accepted and defined for such a lesion development (1).

1. Foreign body in the nose should result in the mattery acute or chronic inflammation of the nose mucosa.

2. Calcium and/or magnesium containment of the putrid flow should be high.

3. Mechanic obstruction, flow of purulence and mucus should be obstructed.

4. Secretion should be exposed to an airstream which enables encrustation by allowing condensation of purulence and mucus, and precipitation of mineral salts. This is probably the true reason for antrolith occurrence in maxillary sinus, which is defined as a rare condition (6).

Not any calcified material has been reported in any of the other sinuses up to today (1). Findings of our case except from the endogenous nidus comply with the items mentioned before.

While sizes of rhinoliths may be smalls, they can also fill the whole nasal cavity. Small scale rhinoliths are generally asymptomatic (2). Big sizes may cause unilateral rhinorrhoea, nose ache, nasal obstruction, nasal malodor, epistaxis, pain, swelling on nose or face, sinusitis, and anosmia, or it may stay asymptomatic and diagnosed coincidentally during routine physical examination. Erosions and perforations of septum and maxillary sinus are reported in the literature (5).

In our case, a bone wall defect is present which gives a defect impression in computed tomography sections of chonca bullosa inferosuperior while it shows mucosa quality in endoscopic examination.

BT investigation is recommended due to its sensitivity to diagnose calcifications at small amounts and it also provides information with regard to neighboring structures. Therefore, it helps you distinguish rhinoliths from other formations (4).

Differential diagnosis must contain calcific nasal polypes, taurus tuberouses, impacted tooth, odontoma, osteoma, osteosarcoma, ossifying fibroma, hemangioma, chondrosarcoma and syphilis, and tuberculosis calcification (4, 5).

Nasal osteoma is benign and low-growing bone tumor which may frequently occur in ethmoid, maxillary, and frontal sinuses (7). Osteoma in middle chonca is rare and osteoma in middle chonca bullosa is diagnosed in a single case (8).

Interestingly in our case, a high density rhinolith with rather regular mass and homogeneity is observed. When this condition is compared to osteoma case, which was diagnosed before, not any contact with bony tissue was observed in any section and wide base bone relation of osteoma case required the rhinolith diagnosis.

Early diagnosis and treatment are important in order to decrease morbidity (1). Surgical resection, debridement, and infection check with the appropriate anti-biotic are preferred treatment methods while ultrasound lithotripsy is not a preferred treatment method. Not any cases of relapse are reported (9).

CONCLUSION

Rhinolith must be considered at differential diagnosis of masses observed in nasal structures and significance of radiologic inspection (especially computed-tomography) should not be forgotten as well as the routine physical examination of otorhinolaryngology.

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