



## Genç Bir Hastada Dev Rinolit Olgusu

### A Giant Rhinolith in a Young Patient

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#### ABSTRACT

Rhinolithiasis is the formation of calcified material around an intranasal foreign body. They are generally found in the anterior part of the nasal cavity. Diagnosis is based on endoscopic nasal examination and imaging methods. Computerized tomography (CT) is useful in determining the location of rhinoliths and in the decision to operate.

In this report, we described a 16-year-old patient with a giant rhinolith who presented with obstruction in the left nasal cavity, difficulty breathing and purulent discharge for the previous 2 weeks. Endoscopic nasal examination revealed that the mass in the nasal cavity extended from the entrance to the anterior nares to the choana. A mass compatible with rhinoliths obliterating almost the entire left nasal cavity and with high radiodensity was determined at CT. The rhinolith was excised endoscopically. The extracted specimen was 10x5x4 cm in size.

Rhinoliths are rare, and diagnosis is based on a history of foreign body in the nose, physical examination and nasal endoscopy. Rhinoliths take many years to form, and to the best of our knowledge this is the largest rhinolith reported to date in such a young patient.

**Key words:** Rhinolithiasis, endoscopic nasal surgery, nasal obstruction

#### ÖZET

Rinolitiazis, burun içerisindeki bir yabancı cisim etrafında kalsifiye materyal birikimidir. Genellikle burnun ön kısmında bulunurlar. Tanısı endoskopik nazal muayene ve görüntüleme yöntemlerine dayanır. Rinolitinin yerinin belirlenmesi ve operasyon kararının verilebilmesi için bilgisayarlı tomografi oldukça faydalıdır.

Bu makalede, sol nazal kavitede obstrüksiyon, nefes almada güçlük ve son iki haftadır devam eden pürülan nazal akıntı şikayetleri ile kliniğimize başvuran ve dev bir rinoliti olan 16 yaşındaki bir hastayı sunduk. Endoskopik muayenede, nazal kavitedeki kitlenin nares girişinden koanaya kadar uzanım gösterdiği görüldü. Bilgisayarlı tomografide sol nazal kaviteyi tama yakın dolduran, yüksek derecede radyodensiteye sahip, rinolit ile uyumlu görünüm izlendi. Rinolit endoskopik olarak çıkarıldı. Çıkarılan spesmen boyutları 10x5x4 cm idi.

Rinolitler nadir olup, tanısı burunda yabancı cisim öyküsü ile birlikte fizik muayene ve nazal endoskopi ile konur. Rinolitlerin oluşumu yıllar alabilmektedir, bildiğimiz kadarıyla bu vaka, bu yaş grubunda bugüne kadar rapor edilmiş en büyük rinolit olgusudur.

**Anahtar kelimeler:** Rinolitiazis, endoskopik nazal cerrahi, nazal obstrüksiyon

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## Introduction

Rhinolithiasis is the formation of calcified material around an intranasal foreign body. It may be classified as endogenous or exogenous, depending on its formation. Rhinoliths forming around body tissues such as tooth are described as endogenous, while those forming around foreign bodies such as stone, insects or wood are described as exogenous<sup>1</sup>. They are generally found in the anterior part of the nasal cavity. Diagnosis is based on endoscopic nasal examination and imaging methods. Since Rhinoliths have quite high radiodensity they can be easily identified and localized using conventional x-ray. However, computerized tomography (CT) is useful in determining the location of rhinoliths with low radiodensity and in the decision to operate<sup>2</sup>. The purpose of this report is to describe a case of a large rhinoliths together with the clinical and radiological findings.

## Case Report

A 16-year-old male patient presented to our clinic with obstruction in the left nasal cavity, difficulty breathing and purulent discharge for the previous 2 weeks. He had no history of any trauma or surgery. Anterior rhinoscopic examination revealed purulent secretion in the left nasal cavity and a mass obliterating the nasal cavity. Endoscopic nasal examination revealed that the mass in the nasal cavity extended from the entrance to the anterior nares to the choana. A mass compatible with rhinoliths obliterating almost the entire left nasal cavity and with high radiodensity was determined at CT (Figure 1). The rhinolith was excised endoscopically.

The extracted specimen was 10x5x4 cm in size (Figure 2). Histopathology was reported as rhinolith with chronic necrotic inflammation. No complications were encountered at follow-up after 6 months.

## Discussion

Rhinolithiasis was first described by Bartholin in 1654, and the first chemical analysis was performed by Axmann in 1829<sup>3</sup>. The pathogenesis of rhinoliths is uncertain. A foreign body in the nasal cavity produces a rhinolith by hardening with the deposition around it of elements such as iron and aluminum, and particularly calcium and magnesium, as a chronic inflammatory response<sup>1</sup>. A lengthy period is generally required for rhinoliths to form. The large size of our patient's rhinolith despite his age differentiates our case from others in the literature.

Rhinoliths are usually unilateral and single<sup>4</sup>. They are generally hard and may appear in various shapes. However, they tend to assume the shape of the nasal cavity. Patients present due to nasal obstruction and purulent nasal discharge. Epistaxis, headache, swelling in the nose and face and anosmia may also occur<sup>5</sup>. Diagnosis is based on specific clinical findings in patients with a history of foreign body in the nose, together with endoscopic nasal examination. However, CT is also very useful for determining the location and extension of a rhinolith and for guiding the surgical technique to be used. CT is also of considerable use in showing accompanying paranasal diseases. Rhinoliths must be removed surgically. An endoscopic nasal approach is generally

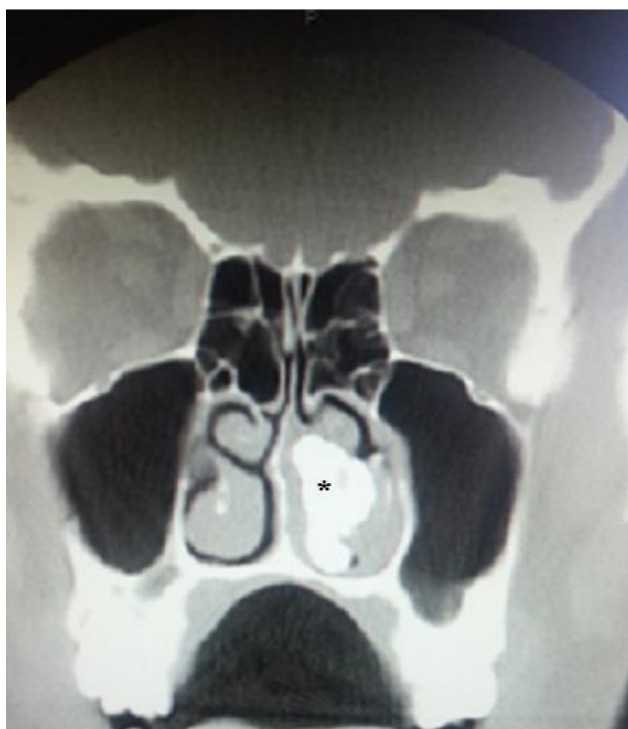
sufficient, although open surgical techniques may also be needed when complications such as septal or antral perforation are observed.

Rhinoliths are rare, and diagnosis is based on a history of foreign body in the nose, physical examination and nasal endoscopy. CT is very practical in diagnosis and determining the therapeutic approach. Treatment is surgical, and an endoscopic approach is usually adequate. Rhinoliths take many years to form, and to the best of our knowledge this is the largest rhinolith reported to date in such a young patient.

## References

- 1-Prasad V, Shenoy VS, Rao RA, Kamath PM, Sowmya V. A giant rhinolith: an unusual entity. *Online J Otolaryngol* 2016; 6(1): 1-5.
- 2- Noh KB, Sachlin IS, Gazali N, Shukri NM. Giant rhinolith: A case report. *Egypt J Ear Nose Throat Allied Sci* 2016; <http://dx.doi.org/10.1016/j.ejenta.2016.09.005>
- 3- Singh RK, Varshney S, Bist SS, Gupta N, Bhatia R, Kishor S. A case Of Rhinolithiasis. *Online J Health Allied Scs.*2008;7(2):7
- 4- Hsiao JC, Tai CF, Lee KW, Ho KY, Kou WR, Wang LF. Giant Rhinolith: A Case Report *Kaohsiung J Med Sci* 2005;21:582–5
- 5- Shamanna K, Shivakumar KL, Rajput R. An Unusual Case of Foreign Body in the Nose Presenting as Rhinolith. *J Evidence Based Med Health Care* 2014;1(7):450-4.

**Figure 1.** Computerized tomography revealed a mass compatible with rhinoliths obliterating almost the entire left nasal cavity. Asterisk: Rhinolith



**Figure 2.** The excised material

