

SNORING AND OBSTRUCTIVE SLEEP APNEA DUE TO NASOPHARYNGEAL TUBERCULOSIS

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Obstructive sleep apnea syndrome (OSAS) is a common disorder and appears most commonly due to oropharyngeal and/or hypopharyngeal collapse during inspiration. Nasal obstruction may also be a cause. Nasopharyngeal masses may be responsible for sleep apnea in adults. We present a 45-year-old male complaining of snoring and diagnosed with OSAS. During the endoscopic examination, a nasopharyngeal mass was seen and a punch biopsy was obtained. The histopathologic diagnosis was "granulomatous inflammation". Following consultations with the Chest Disease Department, the patient was diagnosed with nasopharyngeal tuberculosis and he received medical therapy. In conclusion, nasopharyngeal tuberculosis must be kept in mind as an extremely rare cause of OSAS.

Key Words: Nasopharyngeal Tuberculosis, Sleep Apnea, Snoring.

Primer Nazofarenks Tüberkülozu Sonucu Gelişen Horlama Ve Obstrüktif Uyku Apne Sendromu

Obstrüktif uyku apne sendromu (OSAS) sık rastlanılan bir rahatsızlıktır ve inspirasyon esnasında orofarengeal ve/veya hipofarengeal kollaps sonucu oluşur. Bir diğer nedende nazal obstrüksiyondur. Nazofarenks kitleleri erişkinde OSAS nedeni olabilir. Biz horlama şikayeti olan ve OSAS tanısı almış 45 yaşında bir erkek hasta sunuyoruz. Endoskopik olarak muayenede nazofarengeal kitle görülmesi üzerine alınan biyopsinin histopatolojik tanısı "granülatöz enflamasyon" olarak geldi. Göğüs hastalıkları ile yapılan konsültasyon sonucunda nazofarengeal tüberküloz olduğu tespit edildi ve medikal tedavi altına alındı.

Sonuç olarak, nazofarengeal tüberkülozu çok nadirde olsa OSAS nedenleri arasında akılda bulundurulmalıdır.

Anahtar Kelimeler: Nasofarengeal Tüberküloz, Uyku Apnea, Horlama.

Tuberculosis in the upper airways usually appears as a complication of pulmonary disease. In endemic regions, its incidence increases due to an increase in pulmonary tuberculosis. In fact, tuberculosis of the upper airways is a very rare disorder, especially in the developed parts of the world.

Obstructive sleep apnea syndrome (OSAS) is a neuromuscular disorder characterized by collapse of the upper airways during sleep. Its symptoms are snoring, apnea, frequent awakening, and daytime sleepiness.

In this paper we report a patient with OSAS due to nasopharyngeal tuberculosis and indicate that upper airway tuberculosis is a very rare cause of OSAS.

CASE REPORT

A 45-year-old male was admitted to the Otorhinolaryngology polyclinic with the complaints of snoring, frequent awakening during sleep, daytime sleepiness, nasal obstruction, feeling tired during the day and a cervical mass. He had no history of infectious diseases. The patient had a polysomnography that was recorded 8 weeks before in another medical center. His apnea index was 9 and he was diagnosed with OSAS.

On the otolaryngological examination, a semi-mobile, painless mass 3 x 3 cm was palpated in his right upper jugular region. There was a mass filling the entire nasopharynx and obstructing both choanae on the nasopharyngeal endoscopy. The rest of the otolaryngologic examination was within normal limits.

Complete blood count, blood chemistry, and pulmonary X-rays were normal. The erythrocyte sedimentation rate was 20 mm/h. The nasopharynx CT revealed a mass originating from the posterior nasopharyngeal wall and filling the nasopharynx (Fig. 1). The pulmonary CT was within normal limits.

The punch biopsy obtained from the mass in the nasopharynx was reported as "granulomatous inflammation with caseous necrosis" (Fig. 2). The ppd test with tuberculin revealed an induration 20 mm in diameter.

Nasopharyngeal tuberculosis was diagnosed, and the patient received medical therapy for tuberculosis in the Chest Diseases Department. Eight weeks later, his symptoms had improved. The nasopharyngeal endoscopy was normal. His cervical mass was 2 x 2 cm in size. The medical treatment for tuberculosis was administered for 6 months. The cervical and nasopharyngeal masses completely disappeared. Twelve months after the therapy, the patient had no mass in his nasopharyngeal or cervical regions. He is still under routine follow up at the ENT and Chest Diseases Departments. His complaints of snoring, frequent awakening during sleep, daytime sleepiness, nasal obstruction, and fatigue during the day were

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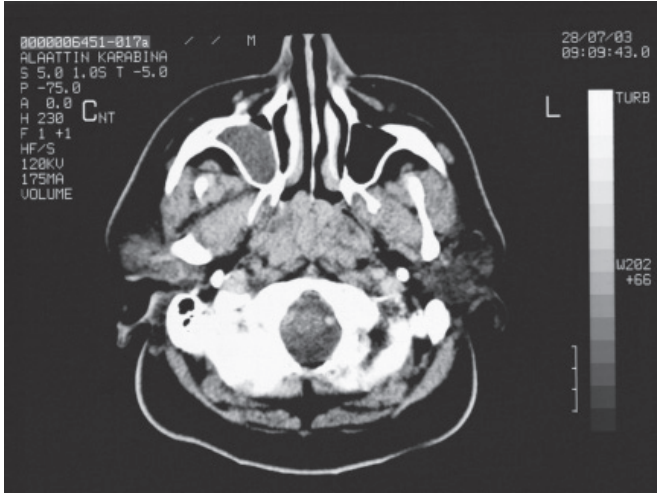


Figure 1. The nasopharynx CT demonstrating the mass originating from the posterior nasopharyngeal wall and filling the nasopharynx.

better. However, we could not demonstrate an improvement regarding the apnea index by polysomnography because of technical limitations.

DISCUSSION

Nasopharyngeal tuberculosis usually appears as a complication of pulmonary tuberculosis. It is usually due to infected pulmonary secretions coming into contact with the upper airways. Laryngeal and gastrointestinal system tuberculosis may accompany upper airway tuberculosis owing to the infective ability of the infected pulmonary secretions on multiple sites (1). Lymphatic spread to cervical lymph nodes is also possible. Hematogenic spread is less frequent than lymphatic spread. Nasopharyngeal tuberculosis appears in 1.9% of patients with pulmonary tuberculosis (2-4). However, it is very rare in the absence of pulmonary tuberculosis. The saprophytic microorganisms in the upper airways have an inhibitory effect on the tuberculous bacilli, and this is the reason for the rarity of the disease. Since there was no evidence for the presence of tuberculosis infections in any other organ, lymphatic or hematogenous spread was unlikely, and it is possible that the infectious agent might have reached the Waldayer ring by inhalation or by the oral route.

Nasopharyngeal tuberculosis most commonly affects women in the 5th-6th decades. Smoking and low socioeconomic status are risk factors (5). Cervical lymphadenopathy, nasal obstruction, rhinorrhea, epistaxis and middle ear disease are the most common symptoms on presentation (6). Patients respond to standard medical therapy quickly (isoniaside, rifampicin, ethambutol, pyrazinamide), usually in a couple of weeks.

The incidence of cervical mass was reported as 59% (12% bilateral) in a series of 17 patients with nasopharyngeal tuberculosis. Twelve percent of the patients had hearing loss, and 6% had tinnitus, otalgia, nasal obstruction and postnasal

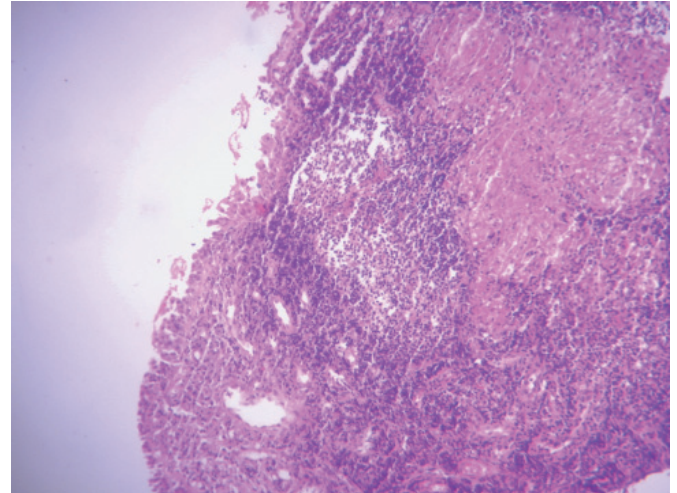


Figure 2. In the histopathological examination of the nasopharyngeal mass, a granulomatous reaction with caseous necrosis can be seen.

drip (7). Issing et al. reported a series of 12 patients with tuberculosis in the head and neck region. Six of them had cervical masses. Laryngeal, nasopharyngeal, parotid and middle ear involvements were also present (8). Aktan et al. reported a patient with nasopharyngeal tuberculosis that had severe snoring. The patient was symptom free after a short course of anti-tuberculous medical therapy (9).

The nasopharynx is an important compartment for airflow in the upper airways. The obstruction of this compartment results in an increased resistance and a decreased airflow in the upper airways (9). Snoring and nocturnal hypopnea and/or apnea may be consequences of nasopharyngeal obstruction (9).

The differential diagnosis of nasopharyngeal tuberculosis must include the other causes of granulomatous pharyngitis, fungal diseases, sarcoidosis, Wegener's granulomatosis, carcinomas and sarcomas (2). The diagnosis of tuberculosis in our patient was based on a histopathological examination demonstrating a granulomatous reaction with typical caseous necrosis, and a positive PPD reaction. A polymerase chain reaction (PCR) would be helpful in the diagnosis. We were unable to perform this because of financial reasons. However, the improvements in the signs and symptoms with medications against tuberculosis confirmed the diagnosis of nasopharyngeal tuberculosis.

In conclusion, nasopharyngeal tuberculosis is very rare. It must be kept in mind as a cause of OSAS and must be included in the differential diagnosis of nasopharyngeal masses.

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