

A rare cause of severe earache: a tick in the external auditory canal

Şiddetli kulak ağrısının nadir bir nedeni: dış kulak yolunda kene

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ABSTRACT

Although tick is rarely seen in the external auditory canal, it may cause pain and tinnitus in the ear. In addition, it is also important in terms of causing Crimean-Congo hemorrhagic fever disease. In this report, we presented the treatment of a 60-year-old patient who was admitted to the emergency service with pain in the left ear and who had a tick in the external auditory canal together with literature data. Removing the tick from the external ear canal with the alligator forceps in a careful manner is important in terms of preventing many diseases that might occur due to the tick.

Keywords: Tick; external auditory canal; foreign body

ÖZ

Dış kulak yolunda kene nadir görülmesine rağmen kulakta ağrı, tinnitus gibi durumlara yol açabilir. Ayrıca Kırım Kongo kanamalı ateşi gibi hastalıkları oluşturması açısından önemlidir. Bu raporda biz 60 yaşında sol kulakta ağrı şikayetiyle acil servise başvurmuş ve dış kulak yolunda kene bulunan hastanın tedavisini literatür eşliğinde sunduk. Kenenin dış kulak yolundan alligator forsepsle dikkatli biçimde çıkarılması keneye bağlı oluşabilecek bir çok hastalığın oluşmasının engellenmesi açısından önemlidir.

Anahtar Kelimeler: Kene; dış kulak kanalı; yabancı cisim

INTRODUCTION

Ticks are blood-sucking ectoparasites that use mostly animals and rarely humans as their hosts and which are the vectors of many bacterial and viral diseases. Following the attachment to a place in the human body, they can transfer some viral and bacterial infectious agents through their saliva into the body. As well as these disease agents, they may also cause foreign body reactions, hypersensitivity and some neurological complications through neurotoxins they secrete (1).

In emergency departments (ED), it is possible to see foreign bodies such as cotton, toy parts, and fruit seeds as well as flies and insects in the external ear canals of the patients who apply with pain in their external ear canals. A tick in the external auditory canal is a rare cause of application to ED. The symptoms such as pain, tinnitus, imbalance and facial paralysis were reported in the external auditory canal

because of tick bites in previous studies (1,2). Sometimes no symptoms are seen in patients (2). The tick may adhere to the external auditory canal or tympanic membrane with the help of its mouth, and the enzymes secreted through its saliva are the cause of local pain (3).

In this case report, we presented the management and the treatment of a 60-year-old patient who applied to the ED with severe earache together with literature data.

CASE

A 60-year-old female patient who was living in rural area applied to the ED with complaints of severe pain in the left ear, pain that spread to the left side of the head, and loss of sensation in the left side of the face. There was also a fullness sensation in the left ear. The complaints of the patient had started one day before, and increased gradually.

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Received: 13.01.2019 **Accepted:** 09.03.2019 **Doi:** 10.32322/jhsm.512259

Cite this article as: Aksakal C. A rare cause of severe earache: a tick in the external auditory canal. J Health Sci Med 2020; 3(2): 190-192.

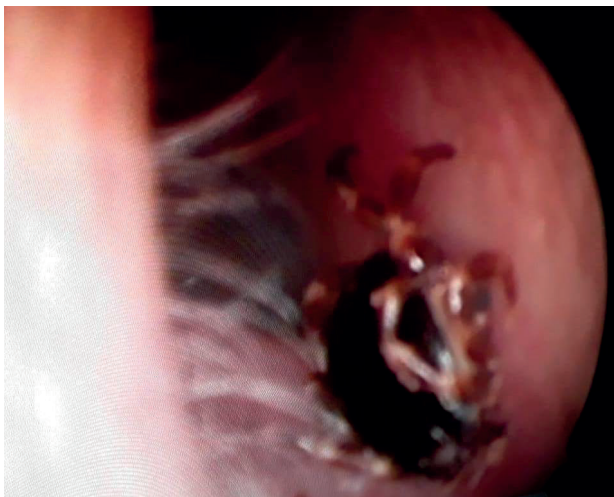


Figure. Tick in the external auditory canal

According to the anamnesis of the patient, she had no other chronic diseases. When she applied to the ED, she had body temperature as 36,7°, pulse was 82/min, and blood pressure was 130/80. The laboratory values of the patients were; white blood cell (WBC) amount was 10900 μ L, platelet count (PLT) was 240000 μ L, hemoglobin (Hgb) level was 13.1 g/dL, alanine aminotransaminase (ALT) level was 21 unit/liter (U/L), aspartate aminotransaminase (AST) level was 13 U/L. In the autoscopic examination of the patient in the ED, a mobile tick was detected in the posterior wall of the left ear external auditory canal (**Figure**). The tympanic membrane was intact, and slight hyperemia was observed around the area where the tick was attached. No pathologies were detected in the other system examinations. Following local anesthesia in the left external ear canal, the tick was removed carefully with the help of the alligator forceps by ensuring the vision of the external ear canal with 0° endoscope. The tick that was removed was identified as *Hyalomma marginatum marginatum*, which is one of the hard tick types. After this process, the patient was followed-up in terms of Crimean-Congo hemorrhagic fever (CCHF). In the follow-ups, no increases were detected in the temperature, and no abnormal changes were observed in the laboratory findings. The earache and numbness of the ear regressed completely. No abnormal findings were detected in the examination of the ear in the 1st week.

DISCUSSION

Ticks are living organisms that have a life-cycle that goes on by absorbing blood. The hosts of the ticks consist of pets, humans and wild animals. Ticks can transmit some bacterial and viral agents through their mouths. As a result of this, life-threatening diseases like CCHF, Lyme disease, tularemia, babesiosis, and Rocky Mountain spotted-fever may be seen in humans (4). In Turkey, the first CCHF case was detected in 2002; and until December 8, 2015, a total of 9787 CCHF cases were identified (5).

In most patients who apply to ED, inorganic foreign bodies like cotton, metal pieces and pieces of toys are detec-

ted; and in a few of them, bees, flies, and ticks may also be detected in the ear in small quantities (6). The cases in which ticks are reported in the external auditory canal are observed especially in India, Sri Lanka, Nepal, South Africa, Chile, and Malaysia throughout the world (7). In the external auditory canal, the most frequently reported complications after ticks are earaches, bleeding, tinnitus, and facial paralysis (1,7,8). It is considered that pain and facial paralysis are associated with the neurotoxins transferred to the area through the saliva during the attachment of the tick to the skin (3).

It is important to remove the tick from the bite area as soon as possible to prevent the transfer of infectious agents to the human body. Although methods like petroleum jelly, gasoline, fingernail polish, or 70% isopropyl alcohol over the tick's mouthparts are suggested for removal of the tick, it has also been claimed that these methods are not effective (8). It has been argued that the most effective method is the complete removal of the tick by forceps (8). The removal of the tick from the external auditory canal or tympanic membrane might be challenging when compared with the other body regions since the ear region is relatively narrow. Since the removal of the tick with the help of autoscopic in the ED has the risk of possible complications, we removed the tick from the external auditory canal with the help of a 0° video endoscope and the alligator forceps. However, in some cases, it was observed that it is impossible to remove the tick completely in one piece because the body volume of it increases with the volume of the blood it sucks from humans (9).

Removing the tick from the area it affects is important to prevent the infection of disease factors as well as to avoid local granulomas and abscesses that might occur. Previous studies have shown that the risk of infection by the tick is high especially in the first 48 hours. In addition, the patient should be followed-up with clinical and serological tests in the period following the removal of the tick (10). In our case, the tick was removed within the first 24 hours, and no evidence of CCHF was found in the follow-ups.

As a result, careful removal of the tick from the external ear canal by an otolaryngologist is important to prevent possible diseases like CCHF. In this respect, alligator forceps are a safe and effective tool. Such patients should be followed-up with their clinical and laboratory findings after the tick is removed.

DECLARATION OF CONFLICTING INTERESTS

The author declared no conflicts of interest with respect to the authorship and/or publication of this article.

ETHICS

Permission was obtained from the patient to share information.

FUNDING

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

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