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ENTCase

# A RARE CASE OF AURICLE PERICHONDRITIS AS A COMPLICATION OF HUMAN BITE

İNSAN ISIRIĞI KOMPLİKASYONU OLARAK GELİŞEN NADİR BİR AURİKULA PERİKONDRİTİ OLGUSU

Otoloji

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## Özet

Bu çalışmanın amacı, insan ısırığı sonrasında gelişen kulak kepçesi perikondritinin klinik yönetimini değerlendirmektir. İnsan ısırığı, kulak kepçesi perikondritinin son derece nadir sebeplerindendir. Şu anki bilgilerimize göre literatürde Eikenella corrodens nedenli kulak kepçesi perikondriti vakası yayınlanmamıştır. Bu nedenle, bizim olgumuz insan ısırığı sonrası gelişen kulak kepçesi perikondritinin klinik özelliklerini sunan ilk olgudur.

**Anahtar kelimeler:** Aurikula, Eikenella corrodens İnsan ısırığı Perikondrit

## Abstract

The aim of this report is to evaluate the management of auricle perichondritis caused by human bite. Human bite wounds are extremely rare cause of auricle perichondritis. According to the our current knowledge, no reported case about auricule perichondritis caused by Eikenella corrodens following a human bite has been published in the litareture. Thus, our report is the first one to present the clinical features of auricule perichondritis caused by a human bite wound.

**Keywords:** Auricle, Eikenella corrodens Human bite Perichondritis

## Introduction

Auricular perichondritis is described as inflammation of the perichondrium and connective tissue that surrounds the auricular cartilage. The clinical features associated with auricular perichondritis depend on its severity. Initially, it is characterised as a mild pain, which slowly increases and is accompanied by warmth, redness, and swelling. Typically, it occurs in the anti-helix and helix of the pinna, but if not treated, it can spread throughout the auricular cartilage. Pseudomonas aeruginosa is a common causative agent of auricular perichondritis [1,2]. However, perichondritis most commonly occurs due to traumatic injury to the ear with subsequent hematoma and secondary infection. Recently, a growing trend in penetrating injuries, such as acupuncture and ear piercing, have also been thought to cause perichondritis [1,3]. In this study, we present a rare case of auricular perichondritis associated with a human bite wound.

## Case Report

A 38-year-old male was admitted to our clinic with complaints of pain, redness, and swelling of his left pinna. His pinna had been bitten during a fight four days prior to his visit, with symptoms presenting one day after the fight. Clinical examination indicated that there was no loss of any tissue in the auricle. We observed an approximately 2 cm dermal laceration extending from the auricular skin to the cartilage in the scaphoid fossa accompanied by hyperemia, edema, warmth, and tenderness on the helix and anti-helix (Figure 1a).

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**Figure 1**

Left auricle. 1a: Dermal laceration in the scaphoid fossa accompanied by hyperemia, edema, warmth, and tenderness on the helix and anti-helix. 1b: Completely regression of inflammatory symptoms after day 14 of treatment, with only a small amount of crusting in the scaphoid fossa.

Swab and tissue cultures from the laceration region were studied and local wound care was performed. Wound care involved debridement of thickened crusts, irrigation with isotonic sodium chloride solution, and topical application of povidone-iodine, mupirocin, bacitracin, and neomycin. Broad-spectrum empiric antibiotics (amoxicillin clavulanic acid) were prescribed as the initial therapy. Blood samples were taken to test for human immunodeficiency virus (HIV), hepatitis C virus (HCV), hepatitis B virus (HBV), and syphilis. In addition, we provided the patient with tetanus prophylaxis. The results from the tissue and swab cultures diagnosed the patient with Eikenella corrodens. For the treatment regimen, we consulted a microbiology specialist, who suggested ciprofloxacin be added to his therapy. Therefore, we prescribed a combination of amoxicillin clavulanic acid and ciprofloxacin therapy for 14 days. Inflammatory symptoms completely regressed after day 14 of combination therapy, with only a small amount of crusting left in the scaphoid fossa (Figure 1b). Blood tests were negative for HIV, HCV, HBV, and syphilis. Informed consent was obtained from the patient prior to the preperation of this report.

## Discussion

Of the total human bite wounds reported, 20% involve the head and neck and 67% of these involve the auricle. Human bite wounds have a higher risk of infection than bite wounds from other mammals or traumatic injuries due to the abundance of human oral flora. The infection rate of auricular bites, which involves cartilage, is higher than other bites in the head and neck region because of the insufficient blood supply to the pinna cartilage. E. corrodens, a Gram-negative microaerophilic bacillus, is isolated from 30% of all human bite wounds and is well-known for being the most infectious pathogen associated with human bites [4-6]. To the best of our knowledge, no reported case of auricle perichondritis caused by E. corrodens following a human bite has been published. Furthermore, Davidi et al [1] is one of the few to report that human bites may cause auricle perichondritis. However, this study did not mention the clinical features associated with perichondritis caused by human bite wounds. Thus, our report is the first to present the clinical features of human bite related auricle perichondritis.

The goal of auricle perichondritis treatment is to control the infection and heal the tissue in a manner that yields a positive cosmetic outcome. Several studies focused on bite wounds have reported improved outcomes with early diagnosis and immediate treatment [7,8]. In this study, perichondrial infection did not become complicated and treatment was successful. These results may be attributed to the early, appropriate local wound care and the effective systemic antibiotic therapy.

Human bite wounds have been reported to transmit Clostridium tetani spores. For this reason, it is important that the patient be vaccinated against tetanus, if there is any doubt whether they have been adequately immunised. In addition, human bite wounds can also transmit HBV, HCV, and HIV [9,10]. Therefore, post-exposure investigation and prophylaxis, if needed, should be considered for every case.

In summary, the major outcomes of this report are as follows;

- Human bite wounds are an extremely rare cause of auricle perichondritis.
- Microbiological culture is important for selecting the appropriate antibiotic regimen.
- Local wound care limits infection and improves healing.
- Health care professionals should be well-informed that human bite wounds can transmit HBV, HCV, HIV, syphilis and C. tetani.

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