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Case Report

Achilles Tendon Rupture After Abscess from a Cat Bite - A Rare Case

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Abstract

The authors present a case, a 84 year-old female patient, that entered the Emergency Room (ER) due to a cat bite on the posterior side of the distal third of the leg that led to a rupture of the Achilles tendon. The patient was submitted to surgical treatment and microbiological isolation of Morganella Morgani. After 7 days of intravenous antibiotic therapy with clinical and analytical improvements she got discharged with oral antibiotic therapy. It's a rare cause of injury of the Achilles tendon. Animal bites are a common cause of ER events that, many times, lead to infections and damage to important anatomic structures, this means that these should not be neglected. The target of this case report is to present a rare occurrence of injury to the Achilles tendon, after infection from a car bite.

Keywords: Infection; Cat Bite; Morganella Morgani; Achilles Tendon

Abbreviations

ER: Emergency Room

Introduction

Animal bites are a common cause of injury. Cat bites are the 2nd most common bites of a domestic animal. They are more common in adult women, usually on the hand [1].

Animal bites may lead to infections that are, usually, polymicrobial bacterial.

The approach to an animal bite requires a fast cleaning of the wound, the evaluation of the damaged structures and antibiotic prophylaxis. The surgical approach is performed according to the impact and contamination of the wound. The infections usually require debridement and surgical cleaning, empiric antibiotic therapy [2].

It's estimated that 30% to 50% of cat bites lead to an infection and may need invasive treatment.

Case Presentation

The authors present a case of a 84 year old female patient, autonomous, with Mellitus type II diabetes history, insulin dependent with bad metabolic control. The patient entered the ER due to a cat bite with 2 weeks of evolution. The wound was located on the posterior side of the distal third of the left led, it showed signs of inflammation and purulent drainage. The analytical study showed leukocytosis with neutrophilia and reactive C protein with high values. The drainage of the purulent content and cleaning with saline solution was performed. The patient was discharged with amoxicillin and clavulanic acid. The patient came back to the ER, after one week, with the same symptoms. Objectively she presented a necrosis and Achilles tendon rupture in the distal insertion and spontaneous purulent drainage (Figure 1).

The patient was hospitalized for surgical treatment. During the surgery the complete necrosis of the Achilles tendo was found until the musculoaponeurotic transition (Figure 2). Drainage of abscessed collection was done at the level of the twin region, de-

Figure 1

Figure 2

Figure 3

bridement of devitalized tissues and abundant cleaning (Figure 3). Tissue and purulent material was collected for microbiological study - revealed bacterial isolation of Morganella Morgani.

In the post operative period, the patient was treated with ceftriaxone for 7 days with clinical and analytical improvement, with progressive regression of the inflammatory parameters. She was discharged on the 7th post operative day with cotrimoxazole. After one month she was reassessed: she was clinically well and walking with a walker boot.

Discussion

Cat bites lead to penetrating wounds that can damage bone, joints, and tendons and even cause septic arthritis and osteomyelitis. Infection is a possible complication and there are associated risk factors: location (hands and feet), late treatment (more than 12h), age over 50 years and certain comorbidities such as Diabetes Mellitus [1].

The most commonly isolated microorganism in cat bites is Pasteurella (in 70-80%).

Treatment of this type of lesion can be conservative or surgical. Conservative treatment consists of cleaning the wound with saline, prophylactic antibiotic therapy, anti-tetanus immunoglobulin when indicated, and rabies prophylaxis if the animal is suspected of having the disease. Regarding antibiotic therapy, Amoxicillin and Clavulanic Acid are the most common choice but Cefuroxime or Ceftriaxone can also be used. Surgical treatment is reserved for cases where there is damage to structures such as tendons or the nail bed, necrotic tissue, abscesses, or even septic arthritis [2].

In this case, we initially opted for conservative treatment with cleansing of the wound with saline and the patient was medicated with Amoxicillin and Clavulanic Acid. Despite this, after a week the patient still showed signs of inflammation of the wound, and she still had an abscess dorsal to the insertion of the Achilles tendon and rupture of the tendon. Surgical treatment was therefore necessary.

The microbiological study revealed isolation of Ceftriaxone-sensitive Morganella Morgani, which was not the most typical organism. Nevertheless, after 7 days of ceftriaxone, the patient was clinically and analytically well. She was discharged with a walker boot which she tolerated well. Surgical reconstruction of the Achil-

les tendon was proposed, but the patient rejected it.

Conclusion

Animal bites are a common cause of emergency room visits that can often culminate in infection and injury to important anatomical structures. Despite this, there are no well-defined recommendations for the treatment of these injuries.

This is a rare cause of Achilles tendon injury, with only one other case described in the literature [3].

Conflict of Interest

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