

A case of *Mycobacterium marinum* infection responds well to doxycycline treatment

Doksisiklin tedavisine iyi yanıt veren bir *Mikobakterium marinum* enfeksiyonu olgusu

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SUMMARY

Mycobacterium marinum is a saprophytic atypical mycobacterium. It often causes skin and soft tissue infection in humans by inoculation. Transmission usually occurs as a result of exposure to aquariums, swimming pools, fish or other marine organisms. Clinically, single or multiple papules, nodules, plaques, abscesses or ulcers are seen in the distal extremities. It rarely causes invasive infections such as osteomyelitis. Due to its rarity and good response to doxycycline treatment, we found it appropriate to present it.

Keywords: doxycycline, *Mycobacterium marinum*, swimming pool granuloma

ÖZET

Mikobakterium marinum saprofitik atipik bir mikobakteridir. İnsanlarda sıklıkla inokülasyon yoluyla deri ve yumuşak doku enfeksiyonuna sebep olur. Bulaş genellikle akvaryumlar, yüzme havuzları, balık veya diğer deniz canlılarına maruz kalma sonucunda olur. Klinik olarak çoğunlukla ekstremitelerde distallerinde tek veya multipl papül, nodül, plak, apse veya ülser şeklinde lezyonlar izlenir. Nadiren osteomyelit gibi invaziv enfeksiyonlara sebep olur. Nadir görülmesi ve doksisiklin tedavisine iyi yanıt vermesi sebebiyle sunmayı uygun bulduk.

Anahtar kelimeler: doksisiklin, *Mikobakterium marinum*, yüzme havuzu granülomu

INTRODUCTION

Mycobacterium marinum is a saprophytic atypical mycobacterium that often causes skin and soft tissue infection through inoculation. It may be transmitted by exposure to aquariums, swimming pools, fish or other marine organisms. Clinically, lesions such as single or multiple papules, nodules, plaques, abscesses or ulcers are observed in the distal extremities (1). Rarely, they cause invasive infections such as osteomyelitis (2). Due to its rarity and good response to doxycycline treatment, we found it appropriate to present it.

CASE REPORT

A 26-year-old male patient presented with a 6-month history of reddening on his right hand. He did not have any additional health problems. He was in the aquarium business.

On examination, a nodule of 1x0.5 cm diameter with fine adherent squam was observed on the dorsal aspect of the right hand (Figure 1). No lymphadenomegaly was found in the lymph node examination.



Figure 1

In laboratory tests, sediment and crp values were normal except for mild neutrophilia. Lam imprint test showed no leishmania amastigotes. Histopathological examination revealed no bacilli and fungal hyphae in PAS staining. Parakeratosis and acanthosis in the epidermis and langans type giant cells in the dermis were accompanied by inflammatory infiltration including polymorphonuclear leukocytes. Mycobacterial growth was not detected in tissue culture.

Good response was obtained with doxycycline 200 mg / day for 4 months (Figure 2). No recurrence was observed within six months after the end of treatment.



Figure 2

DISCUSSION

The infection occurs approximately 2-6 weeks after the trauma of fish fins or bites. It most commonly appears as a solitary papulonodular lesion on an extremity. Lesions tend to be seen in areas that are open to trauma such as fingers, hands or knees. There is usually a history of occupational exposure and minor trauma (1). In immunocompromised patients, sporotrichoid type with multiple nodules and abscesses may occur and may cause nodular lymphangitis. The disease can then progress to tenosynovitis, arthritis, bursitis and osteomyelitis (2).

The most important factors for *M. Marinum* infection are negative bacterial tissue culture, poor response to conventional antibiotherapy, and suspected water contact. The exact diagnosis can be made by isolation of the microorganism in culture and identification by PCR. Limited superficial lesions can be treated with minocycline / doxycycline 200 mg / day, clarithromycin 1000 mg / day, trimethoprim / sulfamethoxazole 1600 mg / day monotherapy (1,2). The average treatment duration is 3-4 months. Multiple, deep or invasive infections require longer or combined medication use (3).

Although it is rare, we believe that early diagnosis of this infection is important, especially in immunocompromised patients.

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