

Images in Clinical Rheumatology

Infectious Tenosynovitis of the Foot Extensors[☆]

Tenosinovitis infecciosa del aparato extensor del pie

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A 50-year-old male came to the emergency room with fever and pain in the left foot for the past 10 h. He had no history of trauma.

On physical examination we found erythema, and warm, tender swelling of the distal forefoot with pain intensified by flexion of the third toe.

An ultrasound of the foot determined the presence of an hypoechoic effusion into the sheath of the extensor of the third toe at the middle and distal thirds with moderate color Doppler signal and no increase in skin thickness (Fig. 1). Since usually branches of the digitorum extensor have no sheath beyond the middle third of the forefoot¹ we confirmed the diagnosis with an MRI (Fig. 2). We

started antibiotic treatment with vancomycin from the first contact, and debridement was performed on the second day, draining 12 cc of purulent-looking fluid from which we identified a strain of *Staphylococcus aureus*, which coincided with the results of blood cultures.

Infectious tenosynovitis of the foot occurs most often at the plantar flexors and is related to cutaneous perforation by foreign bodies,² a very rare presentation is on the foot extensor region. Mechanical tenosynovitis of the extensor tendons is usually associated with chronic exposure to repeated trauma³ that occurs in the ultramarathoner foot syndrome due to mechanical contact between the tendon and proximal osteophitic prominence wedges.⁴ Cellulitis of the dorsum of the foot is the first differential diagnosis. The diagnosis can be made through ultrasound⁵ visualizing the tendon sheath immersed in a hypoechoic fluid and confirmed through aspiration and microbiological study. MRI can also assess the existence of^{6,7} bone involvement. Antibiotic

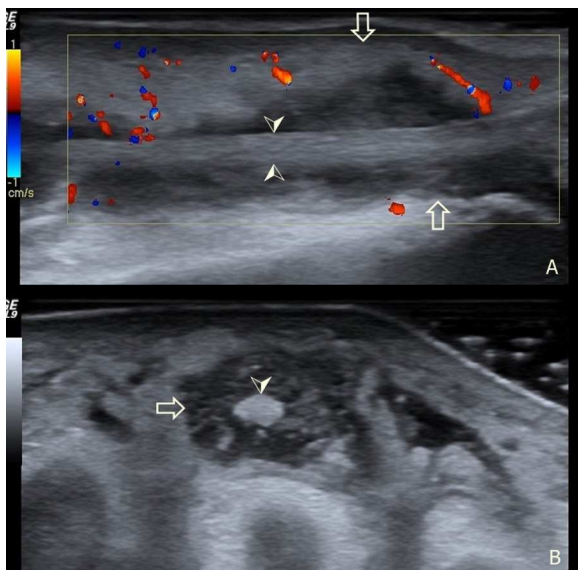


Fig. 1. Ultrasound of the dorsal region of the left foot. (A) Longitudinal section of the third toe extensor. (B) Cross section of the same tendon. Hollow arrow: limits of the tendon sheath. Arrowhead: limits of the tendon within the sheath.

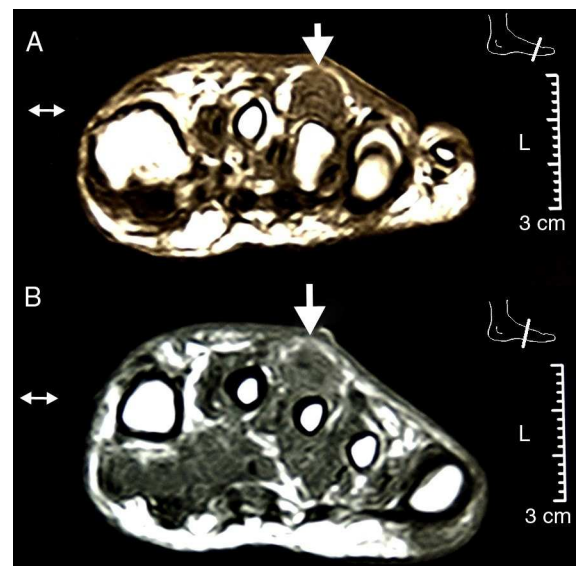


Fig. 2. MRI of the foot in two cross sections: distal third in the upper image and middle third in the lower image. The effusion and hypertrophy of the sheath and the integrity of the cortical bone and lack of skin involvement can be observed.

[☆] Please, cite this article as: Guillén Astete C, et al. Tenosinovitis infecciosa del aparato extensor del pie. Reumatol Clin. 2014;10:56–57.

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treatment should be started before the diagnostic suspicion, although the duration and route of administration is heterogeneous in the few similar case reports found.^{8–10} In our opinion, systemic compromise justifies intravenous antibiotic treatment.

Ethical Responsibilities

Protection of people and animals. The authors state that no experiments were performed on humans or animals.

Data confidentiality. The authors declare that they have followed the protocols of their workplace regarding the publication of data from patients and all patients included in the study have received sufficient information and gave their written informed consent to participate in this study.

Right to privacy and informed consent. The authors have obtained informed consent from patients and/or subjects referred to in the article. This document is in the possession of the author of correspondence.

Disclosures

The authors have no disclosures to make.

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