

Clinical Image

Point-of-Care Ultrasound in the Diagnosis and Management of Chlamydia-Associated Reactive Arthritis with Isolated Peroneal Tenosynovitis

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Clinical Image

Chlamydia reactive arthritis most commonly presents as an asymmetric oligoarthritis with lower extremity predominance¹. It can have a poor prognosis due to reinfection, variable clinical manifestations, and overlap with other common inflammatory arthropathies. Although magnetic resonance imaging (MRI) is often used to evaluate joint effusions, the average wait times have exceeded two to four weeks with costs ranging between \$300-\$5,000 dollars². Point-of-care ultrasound (POCUS) can be used as an efficient diagnostic resource while navigating through the list of differential diagnoses³.

A 45-year-old man presented with 3-weeks of atraumatic left ankle pain with warmth, erythema, and edema that his primary care physi-

cian treated empirically as gout. He was referred to Rheumatology due to a lack of improvement with NSAIDs and colchicine.

Initial POCUS revealed peroneus tenosynovitis, double-contour sign, and a heteroechoic mass suspicious for a tophus (figure 1a). X-rays and MRI demonstrated similar findings; however, the synovial fluid analysis showed a noninflammatory cell count, no crystals, and a negative culture. He was treated with local steroid injection for presumed spondyloarthritis vs. persistent gout.

Within two weeks, the swelling returned. The patient reported dysuria, which prompted further testing notably for Chlamydia and HLA-B27. Following treatment with doxycycline, a repeat ultrasound at a 2-month follow-up showed resolution (figure 2a/2b).

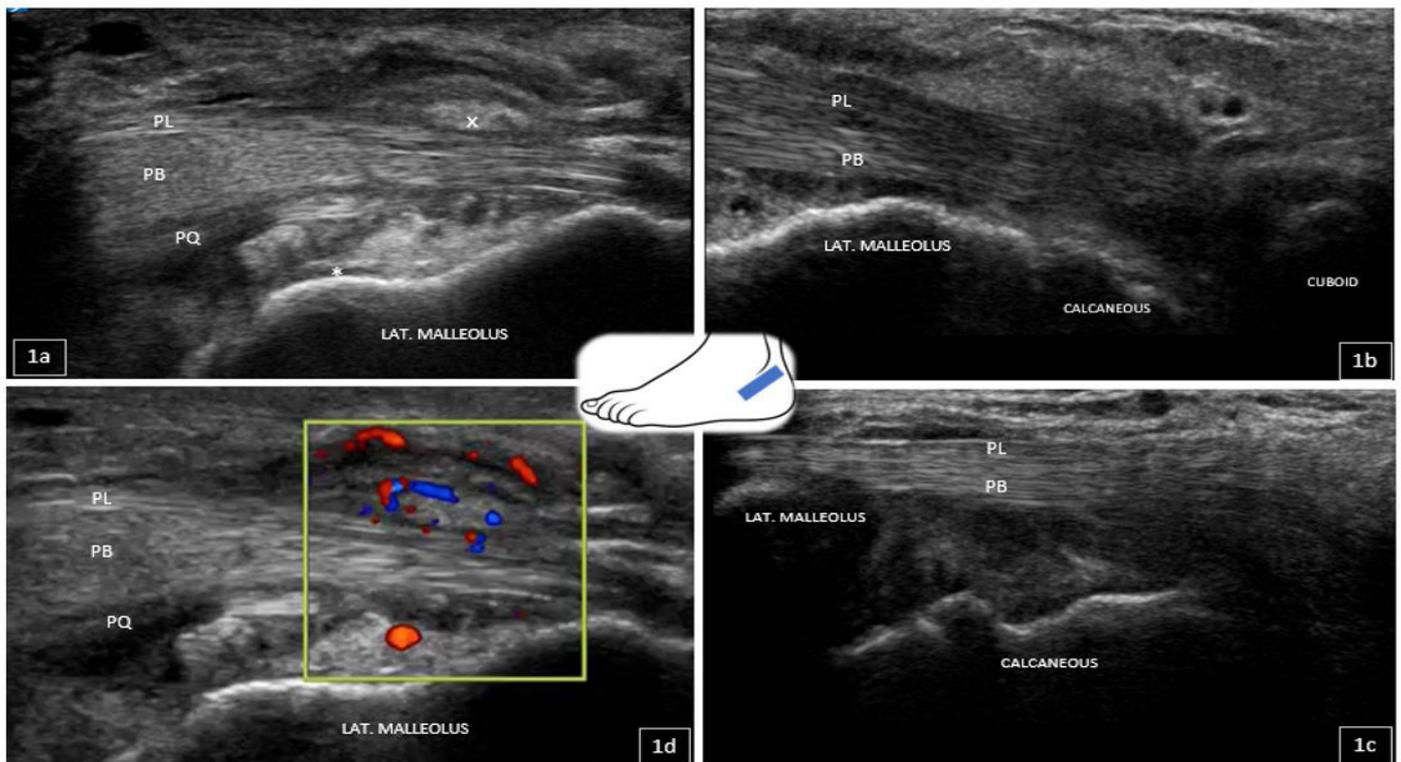


Figure 1:(a-d) Longitudinal scanning of proximal peroneal tendons as they course under the lateral malleolus. (a) Shows double-contour sign (*) at joint cartilage surface, and tophus-like mass (X) and surrounding edema. (d) Color doppler demonstrates increased synovial inflammation. (b-c) Show normal ankle anatomy and resolved inflammation after treatment.

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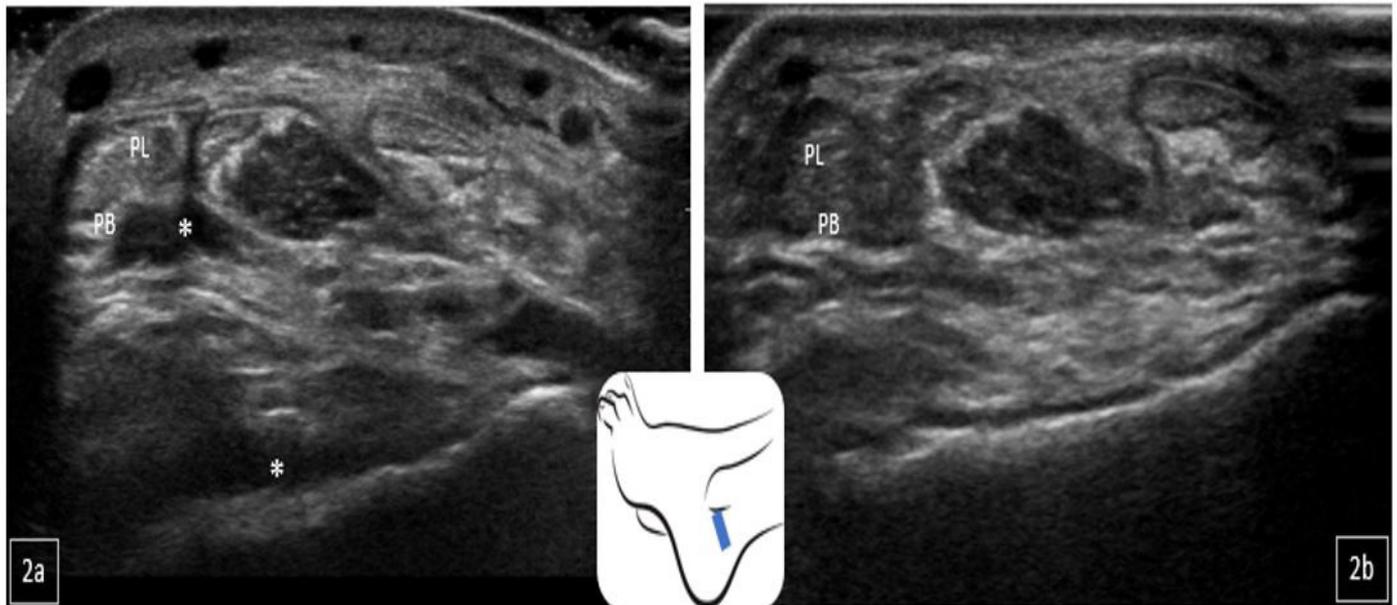


Figure 2:(a-b) Transverse US scans. (a) Shows increased inflammatory fluid collection near peroneal tendons (top *) and joint cartilage (bottom *). (b) Shows absence of inflammatory fluid collections after treatment.

POCUS provides timely and cost-effective imagery of the pathophysiological changes throughout the clinical management of acute arthropathies (e.g. ankle inflammation) with highly comparable diagnostic accuracy to MRI^{3,4}.

Statement of ethics and consent:

Upon full explanation of our desire to publish materials including de-identified details and images related to their case. The patient gave written consent for all or any part of the material to be published in any works or products in any form, so long as we ensure anonymity to the best of our abilities. The patient understands that they cannot revoke the consent once signed. A copy of the consent will be retained by Dr. Michael Loncharich and can be provided upon request.

Conflict of interest:

N/A

Reference

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