

Tenosynovitis caused by *Mycobacterium kansasii* in a patient with polymyalgia rheumatica: a case report

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Introduction:

Non-tuberculous mycobacterial (NTM) infections are an AIDS-defining condition in people living with HIV, but they may also occur in other immunocompromised¹. The most common sites of infection are the lungs and the bloodstream, although virtually any organ system may be involved. Tenosynovitis is a rare but recognized manifestation of nontuberculous mycobacterial infection, with *Mycobacterium marinum* and *Mycobacterium kansasii* being the most commonly isolated species²⁻³. We here report on the occurrence of a right wrist tenosynovitis caused by *Mycobacterium kansasii* in a 65-year-old patient on steroid treatment for polymyalgia rheumatica.

Case presentation:

A 65-year-old man with polymyalgia rheumatica, receiving methylprednisolone 4 mg/day, was referred for infectious diseases evaluation following a positive IGRA- test. His medical history was notable for multiple surgical procedures on the right hand/wrist over the previous five years: median nerve decompression in 2021, flexor tendon tenolysis in 2022, and synovial membrane excision with flexor tenolysis in January 2024 for hypertrophic flexor tenosynovitis of the right wrist. Histological examination revealed granulomatous synovitis.

At presentation, the patient reported right wrist arthralgia, with swelling and tenderness on examination. The chest X-ray was negative, and the patient presented no cough or fever. He subsequently underwent surgical synovectomy in March 2025. Based on the clinical history and histological findings, intraoperative specimens were sent for standard cultures and acid-fast bacilli (AFB) testing. In the postoperative period, wound dehiscence with purulent discharge occurred, which was unresponsive to broad-spectrum antibiotic therapy. A surgical wound revision with debridement was performed approximately 15 days later, however, local inflammation and edema persisted.

Approximately one month after surgery, cultures returned positive for *M. kansasii*, and targeted therapy with rifampicin, azithromycin, and ethambutol was initiated and continued for 12 months. During treatment, the patient underwent every two months clinical evaluations with laboratory tests and electrocardiograms to monitor potential drug-related toxicity. Magnetic resonance imaging (MRI) was performed every six months to assess response to therapy. A progressive clinical and radiological improvement was observed, with reduction of bone marrow edema on follow-up MRI and complete resolution of pain.

In light of the favorable clinical course, antibiotic therapy was discontinued after one year and the patient has been under ongoing clinical and radiological follow-up.

Conclusions:

Osteoarticular involvement due to non-tuberculous mycobacteria is a rare but important differential diagnosis in orthopedic infections, largely occurring in immunocompromised patients. It should be considered in cases with imaging findings suggestive of infection in the absence of microbiological isolation of common pathogens, or when histology demonstrates granulomatous inflammation. In such cases, a specimen for acid fast bacilli (AFB) culture should be sent appropriately to confirm the infection and adjust the treatment accordingly.

References

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