

## Nontuberculous mycobacterial osteomyelitis: A case of *M. intracellulare* osteomyelitis in HIV patient

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**Introduction:** NTM osteomyelitis is a rare manifestation of nontuberculous mycobacteria (NTM) infections and is rarely reported in immunocompromised patients such as those with human immunodeficiency virus (HIV) infection. Here, we present a case of NTM osteomyelitis caused by *Mycobacterium intracellulare* in a patient with HIV, which reflects the importance of consideration and approach to uncommon infection in immunodeficient patients.

**Case Report:** A 32-Year-old male presented with dysarthria and right-side weakness and was diagnosed with cerebral infarction. During the evaluation of the cause of young-age stroke, he was found to have HIV infection with a CD4 cell count of 14 cells/mm<sup>3</sup> and a viral load of 484,000 copies/mL. 2 weeks after the initiation of antiretroviral therapy (ART) of biktarvy, the patient complained of ankle pain. Upon presentation, imaging revealed osteomyelitis of the lateral malleolus, and curettage was performed for the management of osteomyelitis. Cultures from the curettage bone yielded no pathogen growth and he was treated with empiric antibacterial therapy. However, later in the laboratory examination with AFB 1+ findings on the AFB smear of a specimen obtained through curettage, and the pathology was confirmed as a chronic granulomatous Inflammation, consistent with mycobacterial infection. NTM was confirmed through PCR performed on bone specimens, and a combination of imipenem, moxifloxacin, and clarithromycin was used as empirical treatment until the specific species were identified. *M. intracellulare* finally reported from culture. He was treated with ethambutol, rifampin, and clarithromycin, and his symptoms resolved, through therapy was continued for 12 months.

**Conclusion:** This case highlights the importance of diagnosis and treatment of NTM infection in immunocompromised patients. Since NTM osteomyelitis is rare, prompt diagnosis and initiation of appropriate antimicrobial therapy are crucial in preventing complications and ensuring favorable outcomes. Clinicians should maintain a high index of suspicion for atypical pathogens and employ a multidisciplinary approach in the management of osteomyelitis with immunodeficient patient

