

Paradoxical reaction in a case of infectious spondylitis due to *Mycobacterium Intracellulare*

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Introduction: Paradoxical reactions during the treatment of tuberculosis have been often reported, but reports in nontuberculosis mycobacteria (NTM) infections are scarce. *Mycobacterium intracellulare* is a common pathogen of NTM lung disease, while rarely causes extra-pulmonary infections. We experience paradoxical reaction in a case of infection spondylitis due to *M. intracellulare*, a rare clinical presentation of NTM infection.

Case: A 68-year-old man who had experienced relapsing pneumonia of unknown cause, presented with back pain and lower extremity neuropathy. Spine magnetic resonance imaging (MRI) showed discitis of T7-8 and bone marrow edema of adjacent vertebral bodies, suggesting infectious spondylitis. Bone biopsy was performed but no pathogen was identified. Since empirical treatment of ampicillin/sulbactam was not effective, empirical anti-tuberculosis treatment of HREZ was started. Patient's symptoms and inflammatory markers were improved after surgical debridement. After few months, his back pain and laboratory tests worsened again, and he had another MRI and bone biopsy. MRI finding suggested slow progression of inflammation and *M. intracellulare* was isolated from the biopsy specimen. On the diagnosis of NTM spondylitis, a combination regimen of azithromycin, rifabutin, ethambutol, clofazimine, and amikacin were started, but back pain and inflammatory markers were rapidly aggravated. Under the impression of paradoxical reaction, steroids were given to patient and symptoms and inflammatory markers were improved. With steroid tapering off, the patient is regularly checked up through outpatient clinic and no clinical deterioration has been shown for 9 months with anti-NTM medications.

Conclusion: The present case suggests that paradoxical reaction may occur during the treatment of extra-pulmonary NTM infection and could be managed with steroid treatment.

