

Tuberculous Myelitis: A Rare and Challenging Neurological Manifestation of Tuberculosis

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Abstract:

Introduction: Tuberculous transverse myelitis is a rare but significant neurological manifestation of tuberculosis, particularly in endemic regions. It is characterized by inflammatory involvement of the spinal cord, leading to motor, sensory, and autonomic dysfunction. Early diagnosis is challenging and requires a high index of clinical suspicion, supported by radiological, microbiological, and cerebrospinal fluid findings.

Objective: To report a rare case of tuberculous transverse myelitis in a young female and highlight the importance of early recognition, comprehensive evaluation, and timely initiation of anti-tubercular therapy and corticosteroids for improved neurological outcomes.

Methods: A 20-year-old female presented with prolonged fever, urinary retention, headache, gait difficulty, altered sensorium, and progressive lower limb weakness. Clinical examination, cerebrospinal fluid analysis, CBNAAT testing, and magnetic resonance imaging of the brain and spine were performed to establish the diagnosis. The patient received anti-tubercular therapy, supportive care, physiotherapy, bladder management, and intravenous corticosteroids followed by oral steroids.

Results: CSF analysis demonstrated lymphocytic pleocytosis, elevated protein levels, low glucose, and positive ADA. CBNAAT confirmed *Mycobacterium tuberculosis* infection. MRI spine revealed C7–D5 signal abnormalities suggestive of transverse myelitis, while MRI brain showed enhancing basal cisternal lesions. Following anti-tubercular treatment and corticosteroid therapy, the patient showed marked improvement in fever, sensorium, and neurological function within two weeks.

Conclusion: Tuberculosis should be considered as an important cause of transverse myelitis, even in the absence of pulmonary involvement. Early diagnosis and prompt initiation of anti-tubercular therapy combined with corticosteroids can significantly improve neurological recovery and prevent permanent disability.

Keywords:

Tuberculosis, Transverse Myelitis, Tuberculous Meningitis, CBNAAT, Magnetic Resonance Imaging, Corticosteroids, Neurological Recovery.