

Learning Objectives

Transverse myelitis is an uncommon cause of progressive weakness, dysfunction in bowel and bladder habits, and sensory loss. The process is typically acquired and immune mediated.

Case

Clinical Presentation

A 55-year-old man with a history of chronic osteomyelitis of the right foot with prior trans metatarsal amputation (TMA), uncontrolled type 2 diabetes mellitus and hyperlipidemia presented with 3 weeks of progressive thoracolumbar spinal pain, bilateral weakness in his lower extremities, and urinary incontinence.

Physical examination:

- Spinal tenderness at T4
- Bilateral symmetric upper extremity weakness 4/5
- Bilateral lower extremity weakness 0/5
- Reflexes in the upper extremities were 1+ bilaterally and absent in the lower extremities
- Sensation to fine touch was diminished below the knees bilaterally
- He had an open wound on the right foot that appeared infected

Differential diagnosis:

Epidural abscess, Transverse Myelitis

Case Continued

Initial work-up and management on admission:

- Plain radiograph of the right foot showed osteomyelitis involving the osteotomy margins of the residual third and fourth metatarsals
- MRI thoracic spine did not find evidence of abscess or osteomyelitis, but did show abnormal T2 hyperintense central cord signal from T1-T4 without enhancement
- MRI brain revealed mild to moderate sequela of chronic small vessel ischemia

Further work-up during admission:

- Cerebrospinal fluid revealed albumin-cytologic dissociation with 2 c/cmm WBC, and 652.8 mg/dL protein

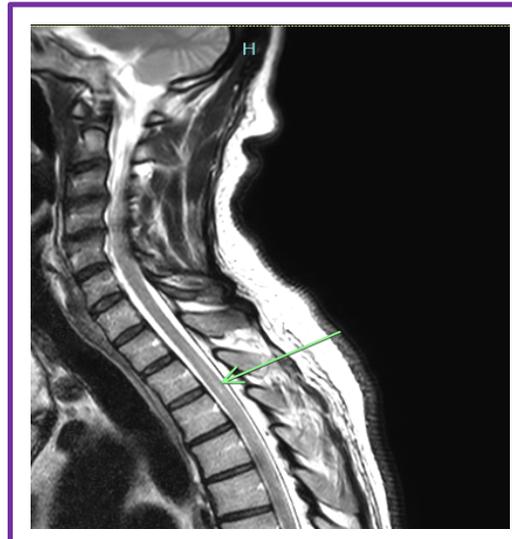


Figure 1. MRI of the thoracic spinal cord with area of demyelination.

Case Continued

Management during admission:

- After infection source control was obtained by incision and drainage of the right foot TMA stump and debridement of the left third and fifth metatarsals,
- Patient was treated with intravenous methylprednisolone 1 g daily for total of 5 days. During and after the steroid course, the patient had significant improvement in his lower extremity weakness, able to move his legs out of bed and stand on his own.
- A PICC line was placed and the patient was continued on cefazolin. Patient was discharged to acute inpatient rehab for ongoing recovery

Discussion

This case highlights the clinical conflict of two disease processes occurring at the same time. Without adequate imaging, it may be easy to suspect an epidural abscess in a patient with Staphylococcus aureus positive blood cultures, back pain, and neurologic symptoms. However, it is important to maintain a broad differential as there can be wide variety of etiologies. Transverse myelitis is a progressive immune-mediated disorder characterized by sensory, motor, or autonomic spinal cord dysfunction associated with a sensory level on physical exam, bilateral symptoms, and spinal MRI showing a T2 hyperintense signal with absence of a compressing spinal cord lesion. In our case, a multidisciplinary evaluation aided in the work up and ultimate diagnosis, leading to rapid improvement and progressive recovery of our patient's symptoms.