60th ANNUAL DIAGNOSTIC SLIDE SESSION 2019

CASE 2019 [3]

Submitted by:
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Clinical History:

The patient is a 62-year-old male with a history of hypertension and bilateral ischemic optic neuropathy resulting in legal blindness. He presented to UCSF Neurology clinic with slowly progressive low back pain, shooting lower leg pains, and worsening gait. Neurologic examination demonstrated significant weakness in a distal-dominant pattern, most prominent in the right tibialis anterior, right extensor hallucis longus, and bilateral toe flexors, with steppage gait on the right. CSF analysis was remarkable for persistent leukocytosis (range 29-195/µl), elevated protein (maximum 2880 mg/dl), and IgM/IgG antibodies against West Nile Virus. Subsequent electromyogram and nerve conduction studies demonstrated a pattern of abnormal findings consistent with bilateral 5th lumbar (L5) and 1st sacral (S1) radiculopathies.

Magnetic resonance imaging of the lumbar spine revealed marked diffuse thickening of the cauda equina nerve roots, with faint enhancement on post-contrast imaging and progressive effacement of the CSF space over a 16-month period. PET-CT scan showed diffuse hypermetabolic activity within the T12 - L1 spinal cord that extended through the conus and lumbar nerve roots. The patient underwent biopsy of the S1 sensory nerve root.

Material submitted:

One H&E stained slide of the S1 nerve root biopsy (digital).

Points for discussion:

1. Differential diagnosis and ancillary testing.
2. Pathogenesis and implications.