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Leptomeningeal enhancement of the spinal cord in sarcoidosis

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Keywords

Neurosarcoidosis; Differential Diagnosis; Magnetic Resonance Imaging (MRI)

Spinal cord involvement is a rare complication of sarcoidosis (<1% cases; mean age ~40-45 years old, slight male prevalence). The diagnosis is especially difficult when spinal cord involvement is the initial presenting symptom or when no other symptoms of sarcoidosis are evident.[1] Given the wide spectrum of clinical presentation and disease course of spinal sarcoidosis (monophasic, relapsing, subacute, worsening over time), initial differential diagnosis can span from inflammatory myelitis [multiple sclerosis (MS), neuromyelitis optica spectrum disorder (NMO), acute transverse myelitis], infectious diseases and neoplasms.[1] On postcontrast T1-weighted MR images, intramedullary enhancement with cord swelling can affect the cervical and/or thoracic cord and can vary in extent [small nodular or longitudinally extensive (≥ 3 cord segments)] and location [central, dorsal or in combination (trident sign) on axial images].[2–7] Cord atrophy might result after the resolution of the inflammatory process. Confirmation of spinal sarcoidosis often requires biopsy of mediastinal lymph nodes or, as in some of the reported cases,[3–5] of the spinal cord itself. The availability of immunosuppressive treatments[1] prompts for a timely diagnosis and appropriate intervention to avoid neurological sequelae.

In “Concurrent LETM and nerve root enhancement in Spinal Neurosarcoid: a case series”, Peng and colleagues report 3 cases of longitudinally-extensive spinal cord involvement as presenting event of biopsy-proven sarcoidosis. In line with previous reports,[2–7] intramedullary enhancing cord lesions with concomitant leptomeningeal and nerve root (including cauda equina) enhancement can help in the differential diagnosis, as these findings are not typical of inflammatory myelitis in MS and NMO.[7, 8] Differently from cord leptomeningeal enhancement, focal enhancement of the leptomeninges covering the brain (seen on delayed postcontrast 3D T2-FLAIR) should not be considered a major diagnostic red flag, since has been shown to occur frequently in MS and other neuroinflammatory conditions (including neurosarcoidosis) as well as neurotropic viral infections (HIV and HTLV).[9, 10]

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