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Editorial

The Trident Sign in Inflammatory Myelopathy: A Useful Imaging Tip for the Diagnosis of Neurosarcoidosis

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Longitudinally extensive transverse myelitis (LETM) typically involving more than 3 vertebral body levels, offers a challenging differential diagnosis, including entities such as Neuromyelitis Optica Spectrum disorder (NMOSD), neurosarcoidosis, malignancy, metabolic disorders, infectious etiologies, vascular causes such as arteriovenous fistula, post radiation therapy, etc [1]. It is not infrequent to find in the clinical scenario of inflammatory myelopathies, the therapeutic challenge of whether a patient should go on immunosuppressive or immunomodulatory therapy targeting NMOSD versus other entities including granulomatous diseases, from which sarcoidosis appears to be an important key player in the landscape of clinical diagnosis and therapeutic decisions [2]. The clinical presentation of the spinal cord syndrome in neurosarcoidosis may be the one of a transverse myelitis, or of a central spinal cord syndrome which predominantly involves the upper limbs classically following a "cape sensory" distribution with weakness of the upper extremities [3].

Enhanced MRI of the spine may show besides features of LETM, linear dorsal subpial and central canal spinal cord enhancement giving the characteristic picture of a Trident. This imaging finding is characteristic for spinal cord sarcoidosis [4] (Figure 1). Frequently CT chest may show enlarged hilar or mediastinal lymphadenopathy. Biopsy of the adenopathy is required to confirm the diagnosis of sarcoidosis. Histopathology frequently shows presence of epithelioid histiocytes characteristic for the granulomatous inflammation. The granulomas typically have minimal amount of focal necrosis [5].

Figure 1: Trident sign.

Cervical spine MRI

T1 with gadolinium axial sequence. Dorsal subpial enhancement and central canal enhancement resembling the shape of a trident head secondary to spinal cord sarcoidosis (with permission from Neurology).

Bibliography

1. Kitley J., *et al.* "The differential diagnosis of longitudinally extensive transverse myelitis". *Multiple Sclerosis* 18 (2012): 271-285.

2. Jacob A and Weinshenker B. "An approach to the diagnosis of acute transverse myelitis". *Seminars in Neurology* 28 (2008): 105-120.

3. Schadler P., *et al.* "Central Cord syndrome: a review of epidemiology, treatment and prognostic factors". *JSM Neurosurgery and Spine* 4 (2016): 1075.

4. Zalewski N., *et al.* "Central canal enhancement and the trident sign in spinal cord sarcoidosis". *Neurology* 87 (2016): 743-744.

5. Rosen Y. "Pathology of sarcoidosis". *Seminars in Respiratory and Critical Care Medicine* 28 (2007): 36-52.