MRI Features of Longitudinally Extensive Transverse Myelitis in Systemic Lupus Erythematosus: A Case Report

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Abstract

Background: Longitudinally extensive transverse myelitis (LETM) is a rare but severe neurological manifestation of systemic lupus erythematosus (SLE). Magnetic resonance imaging (MRI) plays a critical role in diagnosis and in distinguishing LETM from other causes of extensive spinal cord lesions.

Case Presentation: A patient presented with acute urinary retention, fever (39°C), and rapidly progressive bilateral lower limb weakness progressing to flaccid paraplegia (0/5 MRC) with a T6 sensory level. MRI spine demonstrated longitudinally extensive T2-hyperintense intramedullary signal abnormality extending from T6 to the conus, consistent with LETM.

Cerebrospinal fluid analysis showed lymphocytic pleocytosis and elevated protein. Autoimmune serology confirmed active SLE. MRI findings, in conjunction with clinical and laboratory data, supported a diagnosis of SLE-associated LETM following exclusion of alternative causes such as infection, neoplasm, and demyelinating disease.

Conclusion: MRI is essential in the early identification and characterisation of LETM and plays a pivotal role in guiding diagnosis and management. Recognition of characteristic imaging features can facilitate prompt treatment, although outcomes may remain poor despite aggressive immunotherapy.