Neuroimmunology

Can multiple sclerosis be reliably differentiated from isolated CNS lupus? Pro

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Differentiation of systemic lupus erythematosus (SLE) from multiple sclerosis (MS) may pose a clinical challenge, especially when neuropsychiatric symptoms are accompanied by white matter lesions within the central nervous system (CNS). The clinical tools lack discriminative power. In MS the currently applied McDonald criteria are designed to confirm diagnosis in subjects with high likelihood of MS and a typical clinical picture, but are not designed as a differentiation tool. Anti-dsDNA antibodies, which are a hallmark of SLE, could be absent in neurolupus. In SLE nervous system is involved in up to 75% of patients. In 30-40% of neuropsychiatric SLE, neurological symptoms occur around the time of lupus diagnosis, so they can manifest as clinically isolated neurological syndrome (CIS), before other systemic manifestations occur. If CNS pathology in lupus is associated with anti-phospholipid (aPL) syndrome, then the diagnosis will be confirmed by aPL antibodies measurement. When they are absent, neuroradiological measures could aid in reliable distinction between the two disorders. Firstly, lesion load is typically higher in MS, especially with longer disease duration, but this will be less helpful at disease onset. In this case differentiation could be made based on MRI volumetric measurements. Brain volumetry shows different patterns of atrophy in MS, where it is present early (including CIS), and in SLE, where it should not appear until late stages of the disease. Once normative MRI data are established, we are likely to have a reliable tool in distinguishing SLE from MS, even early in the disease course.