Neuromyelitis optica

Neuromyelitis optica (NMO) is a severe relapsing autoimmune inflammatory demyelinating disease that preferentially affects the optic nerves and spinal cord, thus mimicking multiple sclerosis, from which it is distinguished by a serum autoantibody specific for the astrocytic water channel, aquaporin-4 (AQP4).

Differentiating neuromyelitis optica spectrum disorder (NMOSD) and Myelin oligodendrocyte glycoprotein antibody disorder (MOG-AD) from multiple sclerosis (MS) is important since MS therapies might result in progression and relapse of the former diseases. Evidence of long extending transverse myelitis (LETM) in magnetic resonance imaging (MRI) is one of the requirements to make an NMOSD diagnosis. However, centrally located lesions on spinal MRI may bring higher sensitivity and specificity to the NMOSD and MOG-AD diagnosis. Diagnostic criteria including the centrality, location, and expansion of the transverse myelitis lesions, in addition to LETM, may be more accurate in the diagnosis of NMOSD and MOG-AD and their distinction from MS [1].

1)
Etemadifar M, Salari M, Etemadifar MR, Sabeti F, Fateh ST, Aminzade Z. Centrally-located transverse myelitis would facilitate the differentiation of NMOSD and MOG-AD from MS. Mult Scler Relat Disord. 2022 Feb 12;60:103664. doi: 10.1016/j.msard.2022.103664. Epub ahead of print. PMID: 35219242.