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Abstract 22-04

Title: Evaluating Characteristic Clinical Features of MOG Antibody-Associated Disease: a Case Series

Presenting Author: Vijay Vobbilisetty, MS-4, USA College of Medicine

Additional Authors: Alexander Williams (USA College of Medicine), Dr. William Kilgo (USA College of Medicine)

Introduction/Background: MOGAD is a recent classification of autoimmune demyelinating disease known for involvement of the central nervous system. Presentation and diagnostic findings may significantly overlap with other diseases including MS or NMOSD. Diagnosis is confirmed by anti-MOG IgG antibody seropositivity. In this case series, we discuss five patients with varying presentations and how the development of more standardized diagnostic criteria may allow us to correctly identify MOGAD before subjecting patients to unnecessary immunosuppression.

Description: We present five MOG-IgG seropositive patients with various clinical manifestations and within the age range of 20 to 45 years old. One was originally diagnosed with MS, then seronegative NMO, and finally MOGAD after consulting three different neurologists. Our second patient presented with left-sided optic neuritis, normal imaging and spinal fluid testing, but came back positive for MOG-IgG. The third patient was originally diagnosed with seropositive NMO and treated accordingly; however, a combination of complications and lack of efficacy led to follow-up CSF testing that resulted in negative NMO titers and positive MOG-IgG. Fourth is a seropositive MOGAD patient with severe transverse myelitis causing paraplegia, currently deciding between long-term IVIG or rituximab to prevent recurrence. Finally, we have a patient with long-term inflammatory uveitis that was later diagnosed with MOGAD following a first-time seizure and identification of contrast-enhancing lesion of the left frontal lobe on MRI.

Discussion and Conclusion: Although a distinct clinical syndrome, MOGAD can be difficult to distinguish from other conditions such as MS and NMOSD. MOG-IgG positivity is required for diagnosis, but false positivity is often seen in patients with low pretest probability. Clinical manifestations include ON, ADEM, TM, and cerebral cortical encephalitis. Additional workup includes MRI of orbit, brain, and spinal cord. Corresponding lesions are often large and confluent. Substantial resolution of lesions may be seen on follow-up imaging. Absence of oligoclonal banding in CSF studies is useful for determining if MOGAD is more likely than MS. Management of acute flares have demonstrated effective response to treatment with IV steroids. IVIG may be used as second-line therapy. Given lower tendency toward relapse, long-term immunosuppression is seen as controversial.

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