

ABSTRACT

Introduction: Multiple sclerosis (MS) is a chronic inflammatory autoimmune, neurological disease that affects the central nervous system, leading to varied neurological symptoms. One of the common presentations of multiple sclerosis is optic neuritis, an acute inflammation of the optic nerve. This case report discusses a young female presenting with optic neuritis as the first manifestation of multiple sclerosis, confirmed using McDonald's criteria, Magnetic resonance imaging (MRI), visual evoked potential (VEP) test, and cerebrospinal fluid (CSF) oligoclonal bands.

Case Presentation: A 21-year-old unmarried female presented with progressive visual impairment in her right eye for one week. Initially experiencing blurring of vision, it rapidly progressed to complete loss of light perception in the right eye. The patient sought medical attention and was referred for neurological evaluation. She reported mild aching pain in the right eye with eye movements, but no other neurological deficits, systemic symptoms, or medical co-morbidities were noted. Neurological examination revealed normal tone, power, and sensations in bilateral limbs, with mildly exaggerated reflexes in all four limbs. Visual acuity was 6/6 in the left eye but

no light perception in the right eye. Rapid afferent pupillary defect was noted in the right eye. Fundus examination was unremarkable.

Discussion: Optic neuritis is commonly associated with multiple sclerosis, and it was the presenting symptom in 15 to 20 percent of multiple sclerosis patients. MRI of the brain and spine showed characteristic lesions in white matter regions, confirming dissemination in space, while the VEP test indicated demyelination in the afferent visual pathways. CSF analysis revealed positive CSF oligoclonal bands, further supporting the diagnosis of multiple sclerosis according to McDonald's criteria. Prompt diagnosis and treatment initiation are essential to minimize disease burden.

Conclusion: This case highlights optic neuritis as the initial presentation of multiple sclerosis in a young female. Using McDonald's criteria, MRI, VEP test, and CSF analysis, the diagnosis of multiple sclerosis was confirmed, leading to the early initiation of disease-modifying treatment. Early diagnosis and intervention are crucial to reduce the impact of the disease and improve the long-term prognosis for patients with multiple sclerosis.