Bridging Minds and Vision: The Need for Neurology and Ophthalmology Synergy in Multiple Sclerosis

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Editorial

Multiple sclerosis (MS) continues to challenge clinicians and researchers alike with its non-specific and heterogeneous presentation and unpredictable course. Among its earliest and most presenting features is visual dysfunction—commonly optic neuritis—which not only reflects localized optic nerve inflammation but also serves as a harbinger of widespread central nervous system (CNS) pathology.[1] This intimate relationship between vision and neurodegeneration positions the eye as a functional and structural biomarker of MS.[2,3] Yet, for too long, neurology and ophthalmology have operated in parallel rather than in concert.

As research increasingly confirms, this siloed approach undermines our capacity to detect, understand, and treat MS comprehensively. A recent review by Tong et al. underscores the evolving understanding of optic neuritis as a complex immunoinflammatory process, often preceding or paralleling broader CNS demyelination. (4) Similarly, visual measures like low-contrast letter acuity (LCLA) and optical coherence tomography (OCT) not only correlate with patient-reported outcomes but also with brain atrophy and disability scores.[5] These tools—frequently housed in ophthalmology clinics—must be integrated into routine neurological practice.[6] Now MC Donalds criteria for Multiple Sclerosis will probably be revised that would incorporate OCT as one of the criterion either replacing or adding among other criteria.

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Moreover, as Newman and Biousse articulated in The Lancet Neurology, that optic neuropathies can be an initial biomarker of several diseases.[7] The retina's unmyelinated layers allow for direct assessment of axonal damage, while tools such as visual evoked potentials (VEPs) reflect functional disruptions of the visual pathways.[6, 8] This dual insight—structural and functional—demands an interdisciplinary lens.

The implications for therapy are equally compelling. While neurologists focus on immunomodulatory agents and disease-modifying therapies, ophthalmologists manage acute visual symptoms and monitor retinal changes. Yet, these efforts are often disjointed. In progressive MS, where visual decline may be subtle and cumulative, the absence of coordinated care can result in delayed recognition of meaningful disease progression9 This separation of specialties is no longer tenable in the era of precision medicine. Integrating ophthalmologic assessments into neurology clinics—and vice versa—can significantly enhance diagnostic accuracy, enable earlier therapeutic interventions, and improve long-term patient outcomes. In resource-constrained settings like Nepal, such collaboration is even more vital, as eye-based diagnostics (like OCT and bedside VEPs) may be more accessible than advanced neuroimaging.[8]

Conclusion

It is time to bridge the clinical and academic divide between neurology and ophthalmology. Multiple sclerosis affects the brain and the eye in equal measure, and a truly patient-centered approach must reflect this reality. The future of MS care lies not in choosing between specialties, but in uniting them—to see more clearly, diagnose more precisely, and act more effectively. Vision is not merely a symptom in MS; it is a roadmap to understanding the disease—and collaboration is our clearest path forward.

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