The optic nerve should be included as one of the typical CNS regions for establishing dissemination in space when diagnosing MS – Commentary

by Frederik Barkhof, professor of Neuroradiology

Institutes of Neurology and Biomedical Engineering, UCL, London - UK

Dept. of Radiology & Nuclear Medicine, VU University Medical Centre, Amsterdam – NL

Address correspondence to f.barkhof@ucl.ac.uk

Disclosures and acknowledgements

FB is supported by the NIHR UCLH biomedical research centre. He received consultancy fees from Bayer, Roche, Merck, Genzyme, TEVA, IXICO, Biogen, GeNeuro, Apitope and Novartis, either as central reader or by serving on steering committees, advisory boards and data-safety monitoring committees.

While optic neuritis (ON) is the archetypical first mode of presentation in multiple sclerosis (MS), its role in the diagnostic criteria remains surprisingly modest. Objective demonstration of an optic nerve lesion is not included in the McDonald criteria for the diagnosis of MS, even in the 2017 revisions, despite the serious consideration which was given to it by the International Panel, in association with the National Multiple Sclerosis Society and the European Committee for Treatment and Research in Multiple Sclerosis, when they recently met to revise the McDonald criteria [1]. The proposal to include optic nerve lesions in the diagnostic criteria was made by a European network, called MAGNIMS (magnetic resonance imaging in multiple sclerosis {www.magnims.eu}), to mirror their proposal [2] to treat symptomatic lesions in the brainstem and spinal cord similarly to asymptomatic lesions – a proposal that was included in the 2017 revisions [1]. The line of reasoning of the MAGNIMS group was that there was no fundamental reason to treat the (symptomatic) lesion in the optic nerve (such a classical site of involvement) differently than a brainstem or cord lesion [2].

In this issue of MSJ, the pros [3] and cons [4] of doing so are elaborated by debaters who, in the end, do not differ much in their conclusion. In the end their answers are “YES, but”, and “NOT, yet”. Such a paradox is a reflective of good science where the dialectics of arguments should stimulate both those who propose and refute the hypothesis to examine the evidence in favour and against it. In fact, both camps conclude that more data is needed for what essentially is a logical, next step for the next version of the McDonald criteria.

The current evidence collected by the MAGNIMS group [5] was designated by the International Panel as too preliminary, despite showing a promising increase in sensitivity. The main concern of the panel was the reduced specificity, which may simply reflect the lack of long enough follow-up to ascertain late converters. However, even when all the abnormal cases do convert and specificity is good, it may signify a better prognosis for patients who present with ON and a few brain MRI lesions only [6]. Though not a diagnostic issue per se, this does convey a different prognosis and treatment implications. The discussion was muddied when going beyond MRI evidence as both camps agree that more standardization and normative data are needed for OCT and VEP.

Essential data that are missing are a prospective study of all types of CIS patients (not just ON) with a systematic examination of the optic nerve, including MRI, OCT and VEP. Other issues that need to be addressed include standardization of these techniques, provision of normative data and differentiation from neuromyelitis optica (NMO). The MAGNIMS group has already embarked on such a study in Europe and hopefully others will contribute to the evidence base to give the optic nerve a more just place in the next iteration of the McDonald criteria.

References

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