
Editor’s note: In considering adjuvant use, see Jackson LR, Fox JG. Institutional policies and guidelines on adjuvants and antibody production. ILAR J 1995;37:141–152.

DOI 10.1002/ana.10228

Mistaken Treatment of Anterior Ischemic Optic Neuropathy with Interferon β-1a
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For patients with optic neuritis, interferon β-1a treatment to prevent future demyelinating events represents a signal advance. After a first attack of optic neuritis, current practice is to obtain magnetic resonance imaging (MRI) scan in search of silent brain lesions. If more than one demyelinating plaque is present, interferon β-1a treatment often is recommended. In the past 6 months, I have examined three patients with nonarteritic anterior ischemic optic neuropathy (AION) and incidental vascular MRI white matter lesions who were erroneously prescribed weekly interferon β-1a injections for the prevention of multiple sclerosis. A typical case follows.

A 52-year-old woman developed acute, painless optic disc edema in her right eye. Visual acuity was reduced to 20/100. Two years later, a similar attack occurred in the left eye, with loss of visual acuity to 20/400 (Fig 1). An MRI scan showed more than a dozen scattered white matter lesions on T2-weighted spin-echo sequences. The patient received a diagnosis of a second attack of optic neuritis and was treated with interferon β-1a for multiple sclerosis.

Optic neuritis and AION sometimes are confused, because they have overlapping clinical profiles. When optic disc edema occurs in optic neuritis, the fundus appearance can closely resemble AION. In both conditions, a second attack in the other eye is common. Finally, in both conditions, MRI often shows multiple, small, T2 white matter lesions. The demyelinating plaques of multiple sclerosis can be difficult to distinguish from the lesions of subcortical arteriosclerotic encephalopathy, which are associated with AION and vascular disease.

Cogan was aware that AION often is misdiagnosed but concluded that “the differentiation from true optic neuritis is not of great importance since treatment of either is simply palliative.” With the advent of interferon β-1a therapy, it has become vital to differentiate accurately between AION and optic neuritis. Features suggesting AION are lack of pain, poor visual recovery, older age, optic disc hemorrhage, and sectorial optic disc edema. AION accompanied by cerebral white matter lesions can masquerade as multiple sclerosis.

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References

DOI: 10.1002/ana.10269