A 51-year-old woman was treated with multiple medications for relapsing-remitting multiple sclerosis (MS) over 20 years, including interferons and glatiramer, but continued to have recurrent attacks of optic neuritis and transverse myelitis, leading to bilateral blindness and triplegia. Even with MS-type lesions on MRI, neuromyelitis optica (NMO) was ultimately suspected and confirmed by detection of aquaporin-4 autoantibodies. MRI showed nonenhancing T2 linear hyperintensity around the ventricular system in areas known to highly express aquaporin-4 (figure).1 Profound spinal cord atrophy was evident, consistent with severe, chronic NMO. This case illustrates the lack of effectiveness and potential detriment when MS-directed immunomodulatory medications are aimed at NMO.2

**AUTHOR CONTRIBUTIONS**

Drs. Braksick and Cutsforth-Gregory were responsible for the initial drafting of the manuscript. Dr. Black assisted in revision of the manuscript and selection of radiographic images. Drs. Weinshenker, Pittock, and Kantarci assisted in revision of the manuscript.

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REFERENCES
Teaching NeuroImages: MRI in advanced neuromyelitis optica
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