Article

Brain Magnetic Resonance Imaging in Acute Optic Neuritis
Experience of the Optic Neuritis Study Group

Roy W. Beck, MD; John Arrington, MD; F. Reed Murtagh, MD ;et al

» Author Affiliations

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Abstract

• **Objective.** —Changes in the brain on magnetic resonance images are common in patients with optic neuritis even when there is no other clinical evidence of multiple sclerosis. The current study was designed to determine systematically the prevalence of brain abnormalities on magnetic resonance images in the patients entered into the Optic Neuritis Treatment Trial.

Design. —Prospective multicenter clinical trial.

Setting. —Referral centers.

Patients and Methods. —Brain magnetic resonance images from 418 patients with acute optic neuritis (77% women; mean age, 32.0 years) were evaluated at a central reading center with the use of a standardized classification system (ranging from 0 for normal to IV for most extensive changes).

Results. —Of the scans, 40.9% were classified as grade 0, 10.8% as grade I, 9.1% as grade II, 6.7% as grade III, and 32.5% as grade IV. For patients with isolated (monosymptomatic) optic neuritis, 26.7% had two or more lesions.

Conclusions. —We found a lower prevalence of brain magnetic resonance imaging abnormalities in isolated optic neuritis than previous studies have reported. This likely is due to our study having a higher degree of standardization of patient inclusion criteria, which limited patient selection bias.