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Figure. Axial sections of brain MRI after double-dose gadolinium administration. T1-weighted and fat-suppressed technique demonstrates enhancement of 3rd (A), 6th (B), and 7th (not shown) cranial nerves bilaterally.

Miller Fisher syndrome: MRI findings

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A 57-year-old man presented with new-onset diplopia. This progressed to complete ophthalmoplegia, facial diplegia, and ataxic gait. Examination demonstrated bilateral 3rd, 6th, and 7th cranial neuropathies, areflexia or hyporeflexia of all deep tendon reflexes, and gait ataxia. CSF demonstrated elevated protein levels with no cells. An MRI of the brain showed enhancement of oculomotor, abducens, and facial nerves bilaterally with no brainstem abnormalities (figure). Miller Fisher syndrome (MFS) was diagnosed.

MFS is thought to be a clinical subtype of the

Guillain-Barré syndrome and is characterized by the neurologic signs of ophthalmoplegia, gait ataxia, and areflexia. Facial paresis also frequently occurs in MFS.¹ Abnormal gadolinium enhancement of cranial nerves in MFS has rarely been documented in the literature.^{2,3} MRI of the brain with a double dose of gadolinium may be a good confirmatory test for a diagnosis of MFS in the correct clinical setting.

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Miller Fisher syndrome: MRI findings

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