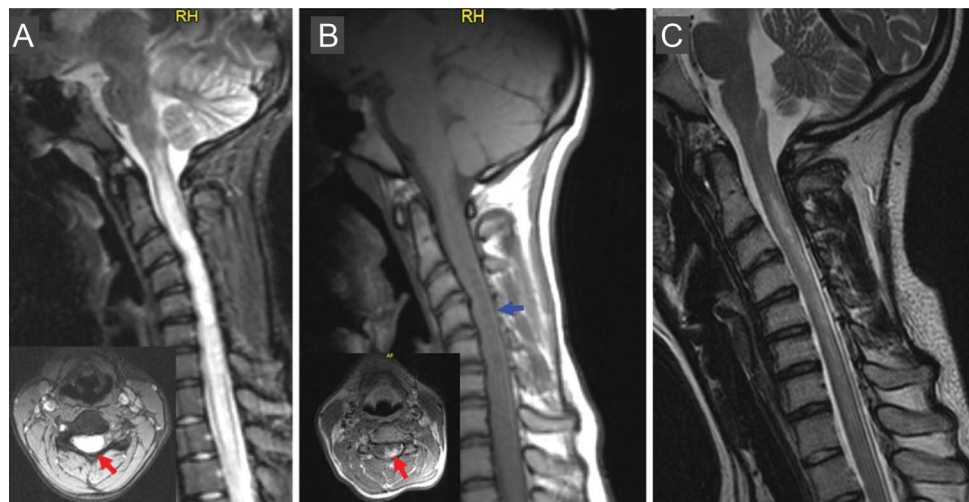


# Teaching NeuroImages: Neuromyelitis optica misdiagnosed as spinal cord tumor

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**Figure** MRI findings of neuromyelitis optica before and after rescue plasmapheresis



(A) Sagittal T2 fat-saturation cervical cord MRI shows an extensive (C2-T4 level) hyperintense lesion involving nearly the whole cord cross-section (insert, red arrow). (B) Sagittal T1 shows “swollen cord” appearance with areas of central hypointensity (blue arrow) that may reflect necrosis, as necrosis has been found on histopathologic specimens in patients with neuromyelitis optica. Enhancement was noted in the left cross-section of the spinal cord after gadolinium injection (insert, red arrow). (C) Substantial resolution of the T2-hyperintense lesion was shown on follow-up sagittal T2 brain MRI following rescue plasmapheresis.

A 17-year-old girl presented with acute-onset cervical pain, followed by left arm weakness and gait disturbances. Spinal cord astrocytoma was diagnosed by MRI performed at an outpatient facility (figure, A and B). The patient was admitted to the neurosurgery department to undergo spinal cord biopsy. A second neurologic evaluation indicated neuromyelitis optica (NMO) as the most likely diagnosis, which was confirmed by NMO-immunoglobulin G seropositivity. The patient was treated with rescue plasmapheresis with substantial clinical and radiologic (figure, C) improvement.

NMO presenting with longitudinally extensive spinal cord lesions resulting in a “swollen cord” appearance and involving a whole cross-sectional area of the cord may be initially misdiagnosed as spinal cord intramedullary tumor.<sup>1,2</sup> Spinal cord tumors should be added to the differential diagnosis of NMO including transverse myelitis, spinal cord ischemia, and systemic autoimmune disease.

## AUTHOR CONTRIBUTIONS

Georgios Tsivgoulis: study design, drafting and revising the manuscript. Stefanos Kontokostas: data collection, critical comments during manuscript revision. Efstathios Boviatsis: data collection, critical comments during manuscript revision. Anastasios Bonakis: critical comments during manuscript revision. Leonidas Stefanis: critical comments during manuscript revision. Konstantinos Voumvourakis: study design, drafting and revising the manuscript.

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## DISCLOSURE

The authors report no disclosures relevant to the manuscript. Go to [Neurology.org](http://Neurology.org) for full disclosures.

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