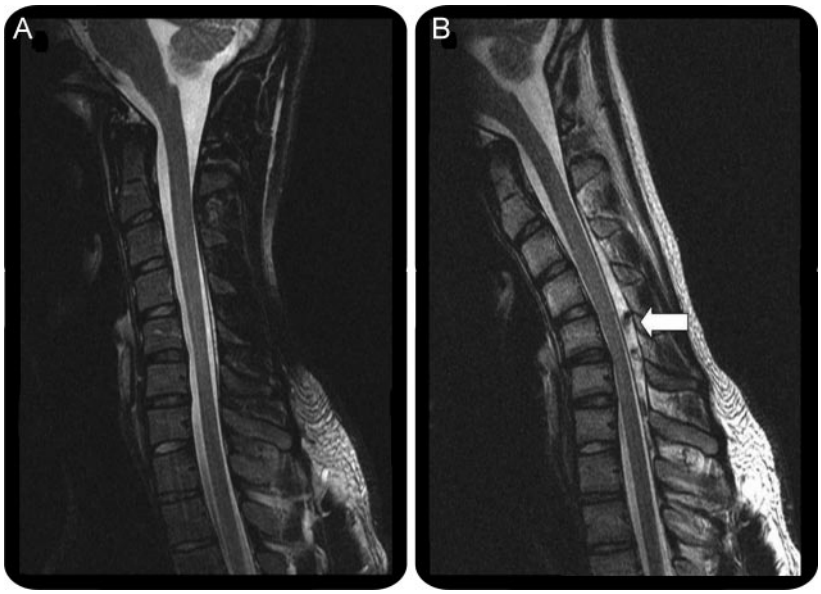
Weak hands from a flexed neck

Figure T2 sagittal cervical spine MRI in neutral position (A) and neck flexion (B)



In neutral position, mild cord atrophy is noted. With neck flexion, anterior displacement of the dural sac and cord at the C6 level was seen. Enlargement of the posterior epidural space with venous engorgement was present (arrow).

An 18-year-old man presented with 2 years of progressive hand weakness. Two routine cervical MRIs were normal. Examination demonstrated weakness and atrophy in left C7–8 myotomes, and weakness in right C7–8 myotomes. The examination was otherwise normal. EMG demonstrated fibrillation potentials and neurogenic motor unit potentials in C7–T1 myotomes bilaterally. The clinical features were characteristic of juvenile distal segmental muscular atrophy (Hirayama disease). Cervical MRI with neck flexion was typical of this disorder, exemplifying the importance of flexion images[1] (figure). Treatment includes observation, cervical collar, or cervical fusion. Response is controversial; however, progression typically ceases spontaneously after several years.

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Disclosure: Dr. Dimberg has received honoraria from ePocrates and Harris Interactive. Dr. Rubin has received royalties from the American Academy of Neurology and American Association of Neuromuscular and Electrodiagnostic Medicine on the sale of 2 educational CD-ROMs (*Sounds of EMG* and *EMG Sound Simulator and Synthesizer*) and honorarium for authorship in *UpToDate*.

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Neurology 2009;73;996
DOI 10.1212/WNL.0b013e3181b879d3