Teaching Video NeuroImages: A 20-year-old man with distal paresthesia

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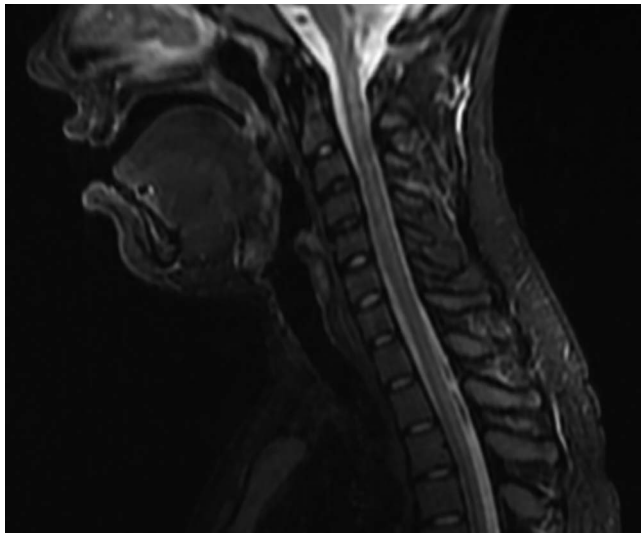
Figure MRI sagittal T2



A 20-year-old man presented with a 3-week history of progressive distal paresthesia in his lower limbs. His gait became clumsy and he became unable to mobilize. The patient was vegetarian and after questioning admitted to regular recreational nitrous oxide use.

Examination revealed a clear dorsal column syndrome with pseudoathetosis of the upper limbs and reduced proprioception of upper and lower limbs with reduced vibration sensation to the xiphisternum. Knee jerk reflexes were brisk bilaterally with absent ankle jerk reflexes and extensor plantars (figure, video 1).

MRI showed high signal in the dorsal column throughout the spinal cord. Vitamin B_{12} levels were low (84 ng/L). This presentation represents subacute combined degeneration of the cord secondary to nitrous oxide abuse by inactivating B_{12} levels. The patient was treated with vitamin B_{12} replacement and intensive neurorehabilitation. Nitrous oxide abuse should always be considered in a young patient with dorsal column syndrome.[1]

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Disclosure
The authors report no disclosures relevant to the manuscript. Go to Neurology.org/N for full disclosures.

Reference
1. Vasconcelos OM, Poehm EH, McCarter RJ, Campbell WW, Quezado ZM. Potential outcome factors in subacute combined degeneration review of observational studies. J Gen Intern Med 2006;21:1063–1068.

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Video

Teaching slides
links.lww.com/WNL/A771

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