MR neurography of a vagal neuropathy

Figure 1 Magnetic resonance neurography and ultrasound findings in vagal neuropathy

(A) Coronal subvolume MIP fat-suppressed T2-weighted magnetic resonance neurography image shows uniformly thickened and T2-hyperintense right vagus nerve (arrows). (B) Coronal fat-suppressed T2-weighted image of the larynx shows hyperintense signal of the right true vocal cord (arrow). Ultrasound longitudinal scan demonstrates thickening of right vagus nerve (arrows on C).

A 46-year-old man with a history of recurrent facial nerve palsies, right trigeminal neuralgia, and Horner syndrome presented with subacute onset of right laryngeal hemiparesis. CSF analysis revealed normal cell count and elevated protein level with albumin-cytologic dissociation.¹ Imaging workup ruled out compressive and infiltrative causes. Magnetic resonance neurography (figures 1A and 2, A–D) demonstrated uniform thickening, T2 signal hyperintensity, and contrast enhancement of the right vagal nerve, from skull base to the thyroid level. The right true vocal cord appeared adducted, T2 hyperintense, with contrast enhancement (figures 1B and 2, C–D), suggesting acute muscle denervation.² A diagnosis of chronic inflammatory demyelinating cranial neuropathy was considered.

Axial fat-suppressed T2-weighted images (A, C), with corresponding contrast-enhanced fat-suppressed T1-weighted images (B, D), show T2 hyperintensity and contrast enhancement of right vagus nerve (arrows, A–D) and of right true vocal cord (arrowheads, C and D). Vocal cord adduction, high T2 signal, and contrast enhancement (C and D) are consistent with palsy due to muscle denervation.

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Author contributions: Dr. Ventura prepared the manuscript and the figure legends and collected the MRI. Dr. Manno provided the clinical data of the patient. Dr. Gobbi served as primary neurology consultant for the case. Dr. Vitale provided the ultrasound images. Dr. Cianfoni supervised the study concept and design and reviewed the manuscript and the image findings of the case.

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REFERENCES

1. Teramoto H, Morita A, Hara M, et al. Relapse with dysphagia in a case of chronic inflammatory demyelinating polyradiculoneuropathy. *Intern Med* 2015;54:1791–1793.
2. Kwong Y, Boddu S, Shah J. Radiology of vocal cord palsy. *Clin Radiol* 2012;67:1108–1114.

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