Teaching NeuroImages: Trochlear nerve schwannoma

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Figure MRI brain with and without gadolinium

(A) T2 axial image demonstrates thickening of the right trochlear nerve as it passes through the subarachnoid space towards the cavernous sinus. (B) T1 postcontrast axial image shows enhancement of the same segment of nerve. (C, D) T1 postcontrast coronal views of the trochlear nerve enhancement. (E) T1 postcontrast coronal view highlights the superior oblique muscles, with notable atrophy of the right superior oblique.

A 54-year-old woman presented for evaluation of binocular vertical diplopia worse in down-gaze. She had limited infraduction of the right eye in adduction and a right hypertropia worse in left gaze and right head tilt, consistent with a right trochlear nerve palsy. MRI brain revealed enlargement and enhancement of the right trochlear nerve in the subarachnoid space (figure). Laboratory testing and CSF analysis were normal. The imaging findings were stable over several years, suggesting the diagnosis of a trochlear nerve schwannoma.

Patients with trochlear nerve schwannomas have a good prognosis.¹ Serial imaging, observation, and symptomatic treatment with prism spectacles are indicated.

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Reference

1. Elmalek VI, Younge BR, Biousse V, et al. Clinical course and prognosis of trochlear nerve schwannomas. *Ophthalmology* 2009;116:2011–2016.

Appendix Authors

Name	Location	Contribution
Francesca Pastrana	University of Missouri–Kansas City School of Medicine	Drafting and revision of manuscript
Sean Gratton, MD	University of Missouri–Kansas City School of Medicine	Drafting and revision for intellectual content

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