

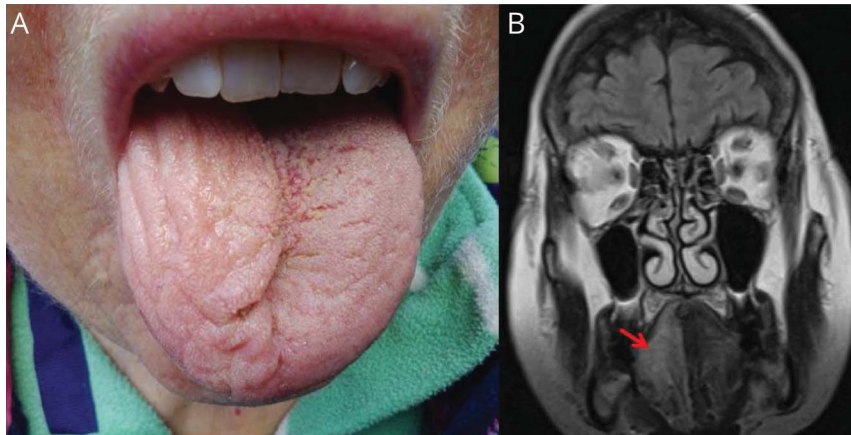
Teaching NeuroImage: Isolated Unilateral Hypoglossal Nerve Palsy due to Skull Base Meningioma

Jessica Coenen, MBChB, Jonathan Cleaver, MBChB (Hons), Richard James, MBChB, and Gurjit Chohan, MBChB
Neurology® 2021;97:e1639-e1640. doi:10.1212/WNL.00000000000012232

Correspondence

Dr. Coenen
 jessica.coenen@nhs.net

Figure 1 Clinical Signs vs Image Depiction of Hypoglossal Nerve Palsy



(A) Photograph of the patient demonstrates right tongue deviation and atrophy. (B) Coronal fluid-attenuated inversion recovery MRI from 2016. Abnormal signal hyperintensity in the right hemi-tongue represents fatty infiltration as a consequence of right CN XII compromise (red arrow).

A 73-year-old woman presented with a 6-month history of intermittent lisp, drooling, and aspiration. Initial assessment showed right hemitongue atrophy (Figure 1) with ipsilateral fasciculations and weakness. Residual neurologic examination was unremarkable. MRI brain confirmed a right hypoglossal nerve palsy (HNP) secondary to a hypoglossal canal meningioma, with classical radiologic appearances (Figure 2).

Isolated HNP is rare and often heralds metastatic disease or is idiopathic.^{1,2} Other causes include local arteriovenous fistulae, Chiari malformations, and iatrogenic from posterior fossa surgery or carotid endarterectomy.² Benign meningiomas rarely cause an isolated HNP but typical radiologic appearances can confirm diagnosis and prevent biopsy.

Study Funding

The authors report no targeted funding.

MORE ONLINE

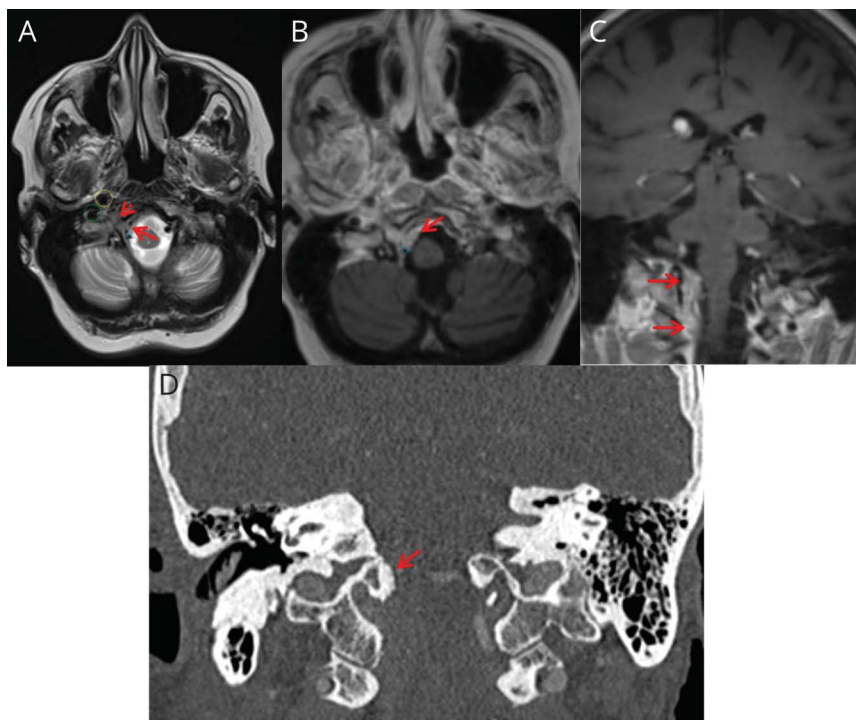
Teaching slides

links.lww.com/WNL/B428

From Gastroenterology (J. Coenen), Imperial College Healthcare NHS Trust, London; and Departments of Neurology (J. Cleaver, G.C.) and Neuroradiology (R.J.), Royal United Hospital Bath NHS Trust, UK.

Go to Neurology.org/N for full disclosures. Funding information and disclosures deemed relevant by the authors, if any, are provided at the end of the article.

Figure 2 Interval MRI Scanning Shows Progression of Meningioma



(A) Axial T2 MRI from 2016 shows abnormal mildly T2 hyperintense soft tissue within the right inferior foramen magnum (red arrow) and extending into the hypoglossal canal (dotted arrow). Highlighted surrounding structures include the right internal carotid artery (yellow), right internal jugular vein (green), and right vertebral artery (blue). (B, C) 3-year follow-up MRI: axial and coronal T1 SPACE postcontrast MRI, respectively. Interval increase in size of the right foramen magnum and hypoglossal canal meningioma, which now abuts the inferior medulla and upper cervical spinal cord (red arrow), is seen. Right vertebral artery shown in blue. (D) Reformatted coronal intracranial CT: angiogram (bone kernel) demonstrates subtle right bony hyperostosis within the right foramen magnum at the hypoglossal canal orifice, a classical finding in a meningioma. Aneurysmal etiology was excluded in this study (not shown).

Disclosure

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

References

1. Khoo S, Ullah I, Wallis F, Fenton J. Isolated hypoglossal nerve palsy: a harbinger of malignancy. *J Laryngol Otol.* 2007;121(8):803-805.
2. Keane JR. Twelfth-nerve palsy: analysis of 100 cases. *Arch Neurol.* 1996;53(6):561-566.

Neurology[®]

Teaching NeuroImage: Isolated Unilateral Hypoglossal Nerve Palsy due to Skull Base Meningioma

Jessica Coenen, Jonathan Cleaver, Richard James, et al.

Neurology 2021;97:e1639-e1640 Published Online before print May 24, 2021

DOI 10.1212/WNL.0000000000012232

This information is current as of May 24, 2021

Updated Information & Services	including high resolution figures, can be found at: http://n.neurology.org/content/97/16/e1639.full
References	This article cites 2 articles, 0 of which you can access for free at: http://n.neurology.org/content/97/16/e1639.full#ref-list-1
Subspecialty Collections	This article, along with others on similar topics, appears in the following collection(s): Clinical neurology examination http://n.neurology.org/cgi/collection/clinical_neurology_examination Clinical neurology history http://n.neurology.org/cgi/collection/clinical_neurology_history CT http://n.neurology.org/cgi/collection/ct MRI http://n.neurology.org/cgi/collection/mri
Permissions & Licensing	Information about reproducing this article in parts (figures, tables) or in its entirety can be found online at: http://www.neurology.org/about/about_the_journal#permissions
Reprints	Information about ordering reprints can be found online: http://n.neurology.org/subscribers/advertise

Neurology® is the official journal of the American Academy of Neurology. Published continuously since 1951, it is now a weekly with 48 issues per year. Copyright © 2021 American Academy of Neurology. All rights reserved. Print ISSN: 0028-3878. Online ISSN: 1526-632X.

