

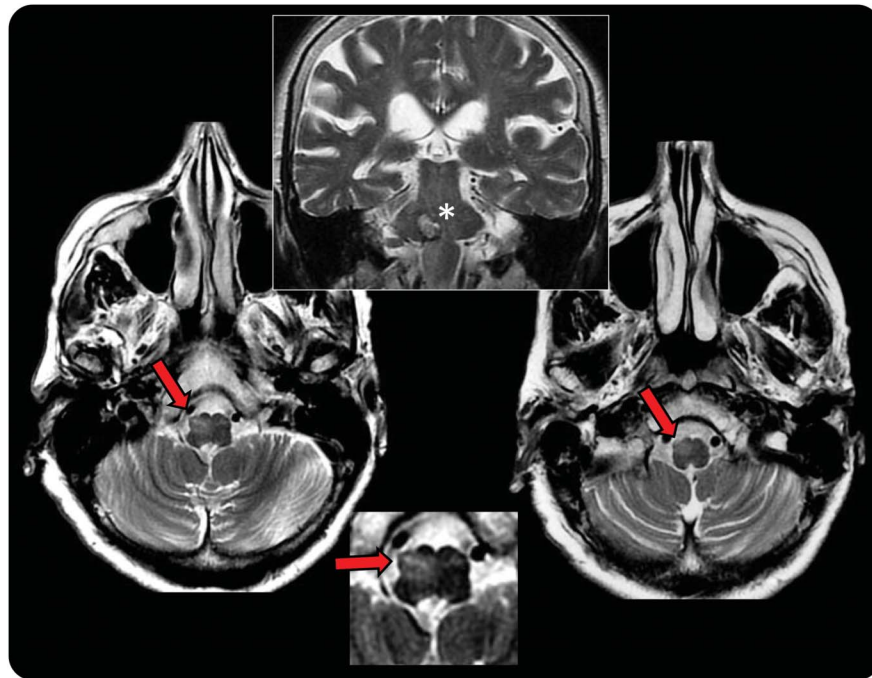
# Teaching Video NeuroImages: Olivary enlargement and pharyngeal nystagmus



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**Figure** T2-weighted MRI of the brainstem



\*The pontine cavernoma in the coronal slice. The arrows highlight a hyperintense signal and volumetric growth of the right inferior olivary nucleus. The bottom figure emphasizes the contrast between the hypertrophic right olivary nucleus and the unaffected contralateral nucleus.

A 77-year-old woman diagnosed with a pontine cavernoma developed progressive difficulty swallowing. A videofluoroscopic swallowing study showed low-frequency rhythmic contractions of the soft palate and upper larynx (video at [Neurology.org](http://Neurology.org)). Brain MRI revealed hypertrophy in the right inferior olivary nucleus (figure).

A chronic cavernoma induces deafferentation of the olivary nuclei, leading to progressive neuronal vacuolization and hypertrophy. The deafferented olivary neurons spontaneously organize into synchronously oscillating clusters, which produces the common clinical sign: a low-frequency tremor of the muscles derived from the brachial arch, pharynx, larynx, diaphragm, eyelids, and face.<sup>1</sup> In 1886, Spencer<sup>2</sup> defined this clinical sign as pharyngeal and laryngeal “nystagmus.”

## AUTHOR CONTRIBUTIONS

Darío A. Yacovino: oversaw neurologic examination and treatment of patient, analyzed data, critical revision of manuscript. John B. Finlay: analyzed data, wrote and revised manuscript.

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## DISCLOSURE

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

## REFERENCES

1. Goto N, Kaneko M. Olivary enlargement: chronological and morphometric analyses. *Acta Neuropathol* 1981;54: 275–282.
2. Spencer HR. Pharyngeal and laryngeal “nystagmus.” *Lancet* 1886;2:702–704.

Supplemental data  
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## Teaching Video *NeuroImages*: Olivary enlargement and pharyngeal nystagmus

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