

Teaching Video NeuroImage: Delayed Radiation-Induced Unilateral Myokymia of the Tongue

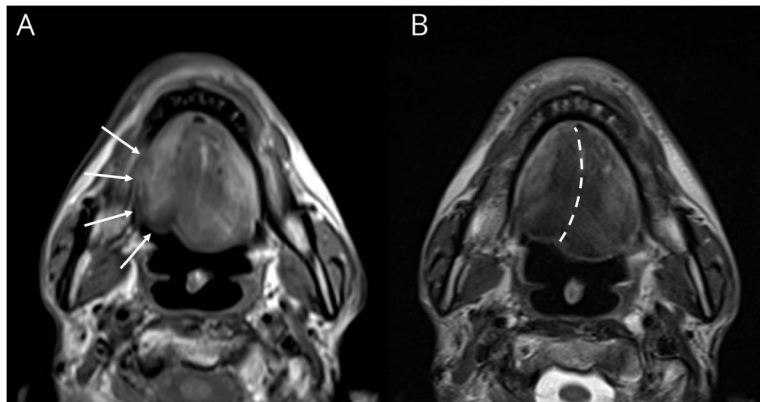
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Neurology® 2023;100:351-352. doi:10.1212/WNL.0000000000201607

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Figure MRI of the Tongue



Axial T1-weighted (A) and T2-weighted (B) images showing prominent right hemitongue atrophy (arrows). The dotted line indicates the course of the lingual septum.

A 49-year-old man with undifferentiated nasopharyngeal carcinoma underwent 2 cycles of chemotherapy, followed by right-side head and neck radiation therapy. Thirteen years later, he developed progressive dysphagia and dysarthria. Neurologic examination showed atrophy associated with wave-like movements and prominent rippling in the right side of the tongue; needle electromyography revealed myokymic discharges in the right genioglossus muscle (Video 1). MRI of the head and neck confirmed isolated unilateral tongue atrophy (Figure) while laryngoscopy showed delayed initiation of swallowing and reduced laryngeal elevation.

Delayed effects of radiation therapy could be seen even decades later and are directly related to radiation dosage.¹ Myokymic discharges of the tongue are likely due to the damage of the hypoglossal nerve induced by microvascular injury and fibrosis with subsequent hyperexcitability of the axon membrane.¹ In an oncology patient, myokymia is usually associated with radiation-induced neuropathy rather than cancer recurrence.²

Study Funding

No targeted funding reported.

Disclosure

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

Publication History

Received by *Neurology* July 22, 2022. Accepted in final form October 11, 2022. Submitted and externally peer reviewed. The handling editor was Whitley Aamodt, MD, MPH.

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Appendix (continued)

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Neurology 2023;100;351-352 Published Online before print November 29, 2022
DOI 10.1212/WNL.0000000000201607

This information is current as of November 29, 2022

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