Teaching NeurolImages: Glossopharyngeal Nerve Focal Pressure Atrophy in Glossopharyngeal Neuralgia

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Figure 1 Preoperative MRI Showing Neurovascular Conflict in Glossopharyngeal Neuralgia

(A) MRI with fast imaging employing steady-state acquisition indicates neurovascular conflict (arrow) of the cranial nerve IX (CN IX). (B) T1 MRI with gadolinium enhancement demonstrates the conflicting artery loop (arrow) of posterior inferior cerebellar artery (PICA), a branch from the vertebral artery (VA).

A 57-year-old woman presented with a 1-year history of frequent, sharp, prickling pain in the right oropharynx, often triggered by swallowing or talking. Oxcarbazepine, pregabalin, and mecobalamin were tried but pain relief was not satisfactory. MRI with fast imaging employing steady-state acquisition indicated neurovascular compression of the cranial nerve IX (figure 1).¹ Glossopharyngeal neuralgia was diagnosed and microvascular decompression was performed. The patient achieved complete relief of pain immediately after surgery. Evident focal nerve volume loss above the compressing artery was observed during operation (figure 2), highlighting mechanic force as the cause for glossopharyngeal neuralgia.

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Disclosure

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

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Figure 2 Intraoperative Snapshot Showing Glossopharyngeal Nerve Focal Pressure Atrophy in Glossopharyngeal Neuralgia

(A) Focal pressure atrophy manifesting as a semitransparent notch (arrow) in front of the conflict artery. (B) The culprit artery loop was held to the left of the nerve; focal pressure atrophy (arrow) is visually evident.

Appendix Authors

Name	Location	Contribution
Luying Li, MD, PhD	West China of Sichuan University, Chengdu	Drafted the manuscript, assisted in data collection
Heng Zhang, MD, PhD	West China of Sichuan University, Chengdu	Data collection, revision of manuscript

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