

# Microvascular Decompression for Geniculate Neuralgia through a Retrosigmoid Approach

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## Abstract

**Objectives** To describe a retrosigmoid approach for the microvascular sectioning of the nervus intermedius and decompression of the 5th and 9th cranial nerves, with emphasis on microsurgical anatomy and technique.

**Design** A retrosigmoid craniectomy is performed in the lateral decubitus position. The dura is opened and cerebrospinal fluid (CSF) is released from the cisterna magna and cerebellopontine cistern. Dynamic retraction without rigid retractors is performed. Subarachnoid dissection of the cerebellopontine angle exposes the 7th to 8th nerve complex. A neuromonitoring probe is used with careful inspection of the microsurgical anatomy to identify the facial nerve and the nervus intermedius as they enter the internal auditory meatus. The nervus intermedius is severed. A large vein coursing superiorly across cranial 9th nerve was coagulated and cut. A Teflon pledget is inserted between a small vessel and the 5th nerve. Photographs of the region are borrowed from Dr. Rhoton's laboratory to illustrate the microsurgical anatomy.

**Participants** The senior author performed the surgery. The video was edited by Drs. V.N. and J.B.

**Outcome Measures** Outcome was assessed by postoperative neurological function.

**Results** The nervus intermedius was successfully cut and the 5th and 9th nerves were decompressed. The patient's pain resolved after surgery and at later follow-up.

**Conclusions** Understanding the microsurgical anatomy of the cerebellopontine angle is necessary to identify the cranial nerves involved in facial pain syndromes. Subarachnoid dissection and meticulous microsurgical techniques are key elements for a successful microvascular decompression.

The link to the video can be found at: <https://youtu.be/pV5Wip7WusE>.

## Keywords

- ▶ cerebellopontine angle
- ▶ microvascular decompression
- ▶ geniculate neuralgia
- ▶ nervus intermedius
- ▶ facial nerve
- ▶ internal auditory meatus
- ▶ microsurgery
- ▶ retrosigmoid approach
- ▶ glossopharyngeal nerve
- ▶ vagus nerve

## Conflict of Interest

None declared.



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