

Bifid facial nerve

Facial nerve identification and preservation is a critical step in the resection of vestibular schwannoma. The use of intraoperative neurostimulation to positively identify the facial nerve along its entire course is essential to prevent injury. This is the first reported case of a bifid facial nerve with a dual origin at the brainstem which we observed during resection of vestibular schwannoma via the translabyrinthine approach. Both roots were visualised to join as one facial nerve trunk outside the brainstem in the cisternal segment of the facial nerve, both trunks demonstrated positive signal with neurostimulation. This case highlights an important anatomical variation and also the importance of correct identification of facial nerve anatomy during resection of vestibular schwannoma and other pathology within the cerebellopontine angle ¹⁾.

The segment of the facial nerve (FN) between its emergence from the skull through the stylomastoid foramen and its bifurcation at the parotid area is referred to as the FN trunk (FNT). Injury to the facial nerve trunk is among the most undesirable outcomes following different otologic, plastic, maxillofacial, and neurosurgical procedures. These procedures frequently involve manipulation and isolation of this segment, and meticulous dissection should be practiced to avoid iatrogenic damage to the nerve. Identification and exposure of the FN trunk, however, may be difficult because it is surrounded by dense connective tissue. This dissection becomes even more difficult and risky when the normal anatomy is distorted. During a routine left conservative superficial parotidectomy of a Pleomorphic Adenoma in the superficial lobe of the left parotid gland, duplication of the FNT was encountered. The FNT after its exit through the stylomastoid foramen, split into 2 main divisions, which rejoined before its penetration into the parotid gland. To the best of our knowledge, this variation has not been previously reported ²⁾.

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Harley B, Rosenfeld JV, Cousins V. Bifid facial nerve with dual origin identified during resection of vestibular schwannoma. *World Neurosurg.* 2019 Sep 4. pii: S1878-8750(19)32369-1. doi: 10.1016/j.wneu.2019.08.213. [Epub ahead of print] PubMed PMID: 31493615.

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Reija MF, Palacio JC. Bifid Facial Nerve Trunk: Anatomic and Surgical Considerations. *J Craniofac Surg.* 2016 Sep;27(6):e541-3. doi: 10.1097/SCS.0000000000002858. PubMed PMID: 27428907.

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