

# Cerebellopontine Angle Surgery

**Cerebellopontine angle** (CPA) surgery carries the risk of lesioning the **facial nerve**. The goal of preserving the integrity of the facial nerve is usually pursued with intermittent **Electrostimulation** using a handheld **probe** that is alternated with the **resection**. Cenzato et al. reported the **experience** with continuous Electrostimulation delivered via the **ultrasonic aspirator** (UA) used for **vestibular schwannoma surgery**.

A total of 17 patients with vestibular schwannomas, operated on between 2010 and 2018, were included in this study. A constant-current stimulator was coupled to the UA used for the resection, delivering square-wave pulses throughout the resection. The muscle responses from upper and lower face muscles triggered by the Electrostimulation were displayed continuously on multichannel neurophysiologic equipment. The careful titration of the Electrostimulation delivered through the UA while tapering the current intensity with the progression of the resection was used as the main strategy.

All operations were performed successfully, and facial nerve conduction was maintained in all patients except one, in whom a permanent lesion of the facial nerve followed a miscommunication to the neurosurgeon.

The coupling of the Electrostimulation to the UA provided the neurosurgeon with an efficient and cost-effective tool and allowed a safe resection. Positive responses were obtained from the facial muscles with low current intensity (lowest intensity: 0.1 mA). The availability of a resection tool paired with a stimulator allowed the surgeon to improve the surgical workflow because fewer interruptions were necessary to stimulate the facial nerve via a handheld probe <sup>1)</sup>.

<sup>1)</sup>

Cenzato M, Stefini R, Zenga F, Piparo M, Debernardi A, Costi I, Fava E. Cerebellopontine Angle Surgery Assisted by Continuous Mapping of the Facial Nerve Via the Ultrasonic Aspirator. J Neurol Surg A Cent Eur Neurosurg. 2020 Oct 21. doi: 10.1055/s-0040-1709162. Epub ahead of print. PMID: 33086423.

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