## Intraoperative neurophysiological monitoring for Skull base tumor surgery

Intraoperative neurophysiological monitoring techniques can be used to evaluate neural functions during surgical procedures. For removal of tumors in the skull base region, Oishi and Fujii perform them for both structural mappings of the compressed cranial nerves and continuous monitoring of their preservation. The goal is to eliminate the critical irreversible damage to the neurological structures and prevent postoperative neurologic deficits. Recording techniques have been developed and neuromonitoring equipment is used in the operation room with the intravenous anesthesia technique. For skull base surgery, in particular, the neuromonitoring contains motor evoked potential(MEP), brainstem auditory evoked potential(BAEP), visual evoked potential(VEP), and others. We believe that the appropriate recording and interpretation of these data can greatly improve the surgical outcomes of tumor removal and prevent postoperative neurologic deficits <sup>1</sup>.

IONM can be applied effectively and reliably during EES in children. EMG monitoring is specific for detecting CN deficits and can be an effective guide for dissecting these procedures. Triggered EMG should be elicited intraoperatively to check the integrity of the CNs during and after tumor resection. Given the anatomical complexity of pediatric EES and the unique challenges encountered, multimodal IONM can be a valuable adjunct to these procedures <sup>2</sup>.

1)

Oishi M, Fujii Y. [Intraoperative Neuromonitoring for Skull Base Surgery]. No Shinkei Geka. 2022 May;50(3):554-563. Japanese. doi: 10.11477/mf.1436204587. PMID: 35670168.

Elangovan C, Singh SP, Gardner P, Snyderman C, Tyler-Kabara EC, Habeych M, Crammond D, Balzer J, Thirumala PD. Intraoperative neurophysiological monitoring during endoscopic endonasal surgery for pediatric skull base tumors. J Neurosurg Pediatr. 2016 Feb;17(2):147-155. doi: 10.3171/2015.7.PEDS14403. Epub 2015 Oct 30. PMID: 26517056.

From: https://neurosurgerywiki.com/wiki/ - Neurosurgery Wiki
Permanent link: https://neurosurgerywiki.com/wiki/doku.php?id=intraoperative\_neurophysiological\_monitoring\_for\_skull\_base\_tumor\_surgery
Last update: 2024/06/07 02:54

