

# Trigeminal Neurostimulation

Peripheral [neurostimulation](#) (PNS) for [medically refractory trigeminal neuralgia treatment](#) and [craniofacial pain](#) is an emerging alternative to traditional surgical approaches. Technical problems with craniofacial PNS have included [electrode](#) migration and erosion, limiting the utility and cost-effectiveness of this procedure.

Kasoff and Bina reviewed the institutional surgical technique for trigeminal PNS implantation, focusing on a novel technique for electrode anchoring.

Consecutive cases of permanent craniofacial PNS placement by a single surgeon over 36 months were reviewed for surgical technique and technical outcomes. Electrodes were placed percutaneously with open anchoring to the pericranium at a separate parietal incision.

Sixteen systems (53 electrodes) were implanted in 14 patients. Median follow-up was 13 months (range, 5-29 months). Electrode placement was successful in all cases with no intraoperative complications. There was 1 lead migration (6.3% per patient; 1.8% per lead) and no cases of erosion. Two patients (14.3%) required explant for infection, 1 of whom was successfully reimplanted. Three patients (21.4%) underwent surgical revision other than for infection.

They presented an improved method for craniofacial PNS surgery which introduces a separate incision for electrode anchoring at the parietal boss. This technique simplifies the procedure and greatly reduces rates of erosion and migration, improving patient comfort and satisfaction <sup>1)</sup>.

<sup>1)</sup>

Kasoff WS, Bina RW. Placement and Anchoring of Trigeminal Neurostimulation Electrodes: Technical Report. Stereotact Funct Neurosurg. 2020 Jan 22:1-8. doi: 10.1159/000503731. [Epub ahead of print] PubMed PMID: 31968343.

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