

# Endotracheal Tube Electrode Neuromonitoring

Vagal nerve stimulators (VNS) are indicated as a [palliative treatment](#) for [medically refractory epilepsy](#). The [vagus nerve](#) may have a variable position within the [carotid sheath](#) and may be confused with a prominent [ansa cervicalis](#).

The objective of a study of Katsevman et al. was to describe an [intraoperative neuromonitoring](#) technique for [VNS](#) placement and provide [stimulation](#) thresholds that may aid in the creation of stimulation protocols. A retrospective study was performed assessing 40 patients undergoing intraoperative [vocal cord monitoring](#) during vagal nerve stimulator placement surgery. [Endotracheal electrodes](#) were utilized to record [vocal cord](#) activity at various surgical time points. The stimulation thresholds were tested at the time of opening of the carotid sheath (mean 0.35 mA [range 0.08-1.00]), after full and circumferential dissection of the [vagus nerve](#) (0.34 mA [0.10-0.90]), after tenting of the vagus nerve in preparation for placement of the electrode (0.22 mA [0.06-1.20]), and after electrode placement (0.26 mA [0.05-1.20]). The vagus nerve was identified in all patients; it was located behind the [common carotid artery](#) (CCA) in two patients, on top of the [internal jugular vein](#) (IJV) in one patient, and in the typical location between the CCA and IJV in the remainder of patients. The average size of the vagus nerve was 2.9 mm [1.5-5.0]. Intraoperative [vagus nerve stimulation](#) represents a safe adjunctive tool that can help localize the nerve, particularly in the setting of varying anatomy or hazardous dissections. It may help reduce the potential for vagal trunk damage or electrode [misplacement](#) and potentially improve clinical outcomes <sup>1)</sup>.

<sup>1)</sup>

Katsevman GA, Josiah DT, LaNeve JE, Bhatia S. Endotracheal Tube Electrode Neuromonitoring for Placement of Vagal Nerve Stimulation for Epilepsy: Intraoperative Stimulation Thresholds. Neurodiagn J. 2022 Feb 28;1-12. doi: 10.1080/21646821.2022.2022911. Epub ahead of print. PMID: 35226831.

From:  
<https://neurosurgerywiki.com/wiki/> - **Neurosurgery Wiki**

Permanent link:  
[https://neurosurgerywiki.com/wiki/doku.php?id=endotracheal\\_tube\\_electrode\\_neuromonitoring](https://neurosurgerywiki.com/wiki/doku.php?id=endotracheal_tube_electrode_neuromonitoring)

Last update: **2024/06/07 02:56**

