

INTRA-OPERATIVE MONITORING FOR EXTERNAL BRANCH OF SUPERIOR LARYNGEAL NERVE

Mohamed, Salah¹; Saeed, Ahmad¹; Aslam, Rizwan¹; Musa Yola, Ibrahim²; Kandil, Emad¹

¹Tulane University, Department Of Surgery, New Orleans, LA, USA; ²Tulane University School Of Public Health, New Orleans, LA, USA

Background/Purpose: The external branch of the superior laryngeal nerve (EBSLN) is at risk of injury during thyroidectomy and had different variants. The purpose of the study is to assess the nerve integrity monitoring values using nerve stimulation technology and compare these values to the recurrent laryngeal nerve (RLN).

Methods: A retrospective review of prospective collected thyroid surgery database by a single surgeon over 2 years period. We examined if there is a racial, gender disparity or weight rule on nerve visualization. All operative data were collected. Pre and post-operative laryngoscopy was done on all patients.

Results: A total of 267 nerves at risk in 2 thyroidectomy patients were included. Of these nerves at risk, 211 (79%) were visualized. The average amplitude and latency for the EBSLN was 264.53 ± 243.24 mAmp and 2.09 ± 0.53 msec, respectively. This was significantly lower when compared to the amplitude and the latency of RLN stimulation 917.57 ± 450.75 and 2.32 ± 0.80 respectively ($p < 0.05$). However, there was no weight, gender or racial disparity related to visualization of the EBSLN.

Discussion & Conclusion: Stimulation is a useful adjunct during superior pole dissection to assure the integrity of the nerve. Values are different when compared to recurrent laryngeal nerve.