

## **ANATOMIC STUDY OF THE EXTERNAL BRANCH OF THE SUPERIOR LARYNGEAL NERVE. ANATOMIC FINDINGS AND ITS IMPLICATION IN THYROID SURGERY.**

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**Background/Purpose:** The External Branch of the Superior Laryngeal Nerve (EBSLN) has been described as the “neglected” entity in thyroid surgery. The purpose of this study was to describe the topography of the EBSLN and its relationship to the adjacent anatomical structures.

**Methods:** 21 formalin-embalmed human cadavers of both sexes ranging in age from 52 to 94 (mean, 78 years) were included in this study. A total of 42 superior thyroid poles (STP) were dissected and the exact course of the EBSLN was identified and its relationship to: i) the STP, ii) the superior thyroid vessels (STV), and iii) the inferior constrictor muscle of pharynx (ICMPH) was noted.

**Results:** The EBSLN was identified in 41 specimens (97.61%). In 19.04%, the EBSLN was crossing the STV > 1 cm above the STP. In 54.76%, the EBSLN was crossing the STV < 1 cm above the STP and in 21.42%, the EBSLN was crossing the STV in plane below the cranial border of the STP. The EBSLN was running its whole course superficially to the ICMPH in 78.57% and in 19%, the EBSLN was penetrating the ICMPH in its lower part.

**Discussion & Conclusion:** Our findings are different from what is published in the literature, as the percentage of cases in which the EBSLN, is vulnerable during thyroidectomies reaches the 76.18%, and the presumed total protection from the ICMPH was not confirmed.