

PARTIAL DIVISION OF STERNOTHYROID MUSCLE DURING TOTAL THYROIDECTOMY : IMPACT ON POSTOPERATIVE VOCAL OUTCOMES

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Background/Purpose: Cutting the sternothyroid muscle near the insertion site is a useful technique to expose the superior pole of thyroid gland during thyroidectomy. However study regarding the vocal outcomes after cutting the muscle has been rarely reported. In this study, we evaluated the impact of partial division of the sternothyroid muscle on postoperative vocal outcomes after total thyroidectomy.

Methods: A retrospective review of 57 patients who underwent total thyroidectomy with central neck dissection for papillary thyroid carcinoma, between October 2012 and January 2013 was conducted. Group A (n=26) included those without cutting the sternothyroid muscle, while group B (n=31) included patients whose muscle was partially cut at the superior pole. All patients underwent acoustic voice analysis before the operation, 2 weeks and 1 month after the surgery and the outcomes were compared between the two groups.

Results: There were no differences between the two groups regarding the fundamental frequency, jitter, shimmer, noise-harmonic ratio and maximal phonation time at each time of voice analysis. Group A showed a decrease of maximum frequency, 2 weeks after surgery (457.97 ± 157.07 Hz vs. 392.77 ± 131.16 Hz, $p=0.03$) but showed no difference after 1 month (456.63 ± 190.72 , $p=0.96$). Group B showed a mild decrease in maximum frequency, 2 weeks after surgery (407.29 ± 146.82 vs. 395.78 ± 146.27), but the difference was not significant. Other postoperative outcomes of vocal analysis showed no significant difference in group A and B.

Discussion & Conclusion: Partial division of sternothyroid muscle during thyroidectomy is useful to expose the superior pole without any negative impact on postoperative vocal outcomes.