

# Title: STRAP MUSCLES TRANSECTION AND CENTRAL NECK DISECTION COULD INTRODUCE SUBJECTIVE ALTERATIONS IN THE VHI-30 AMONG PATIENTS WITH TOTAL THYROIDECTOMY

**Authors:** Díaz-Trueba Flavio Enrique MD, Anaya-Sánchez Sofia MD, Sierra-Salazar Mauricio MD, Pérez-Soto Rafael Humberto MD MSc, Velázquez-Fernández David MD MSc PhD.

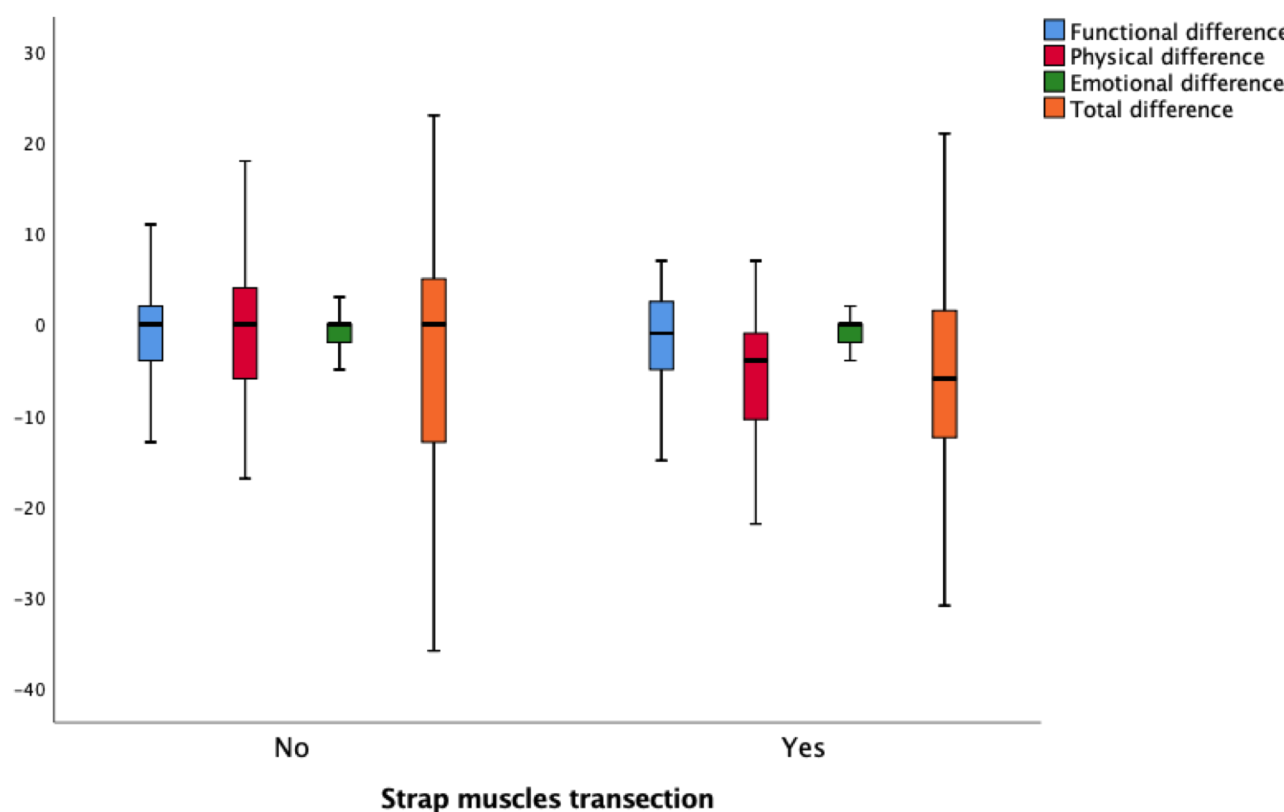
**Institution:** National Institute for Medical Sciences and Nutrition Salvador Zubirán, Mexico City, MEXICO.

**Discussion/ Conclusions:** SMT and CND could produce higher voice handicap scores between thyroidectomized patients vs. controls. Endocrine surgeons should be aware that some patients may report important subjective voice handicap even without objective VCP.

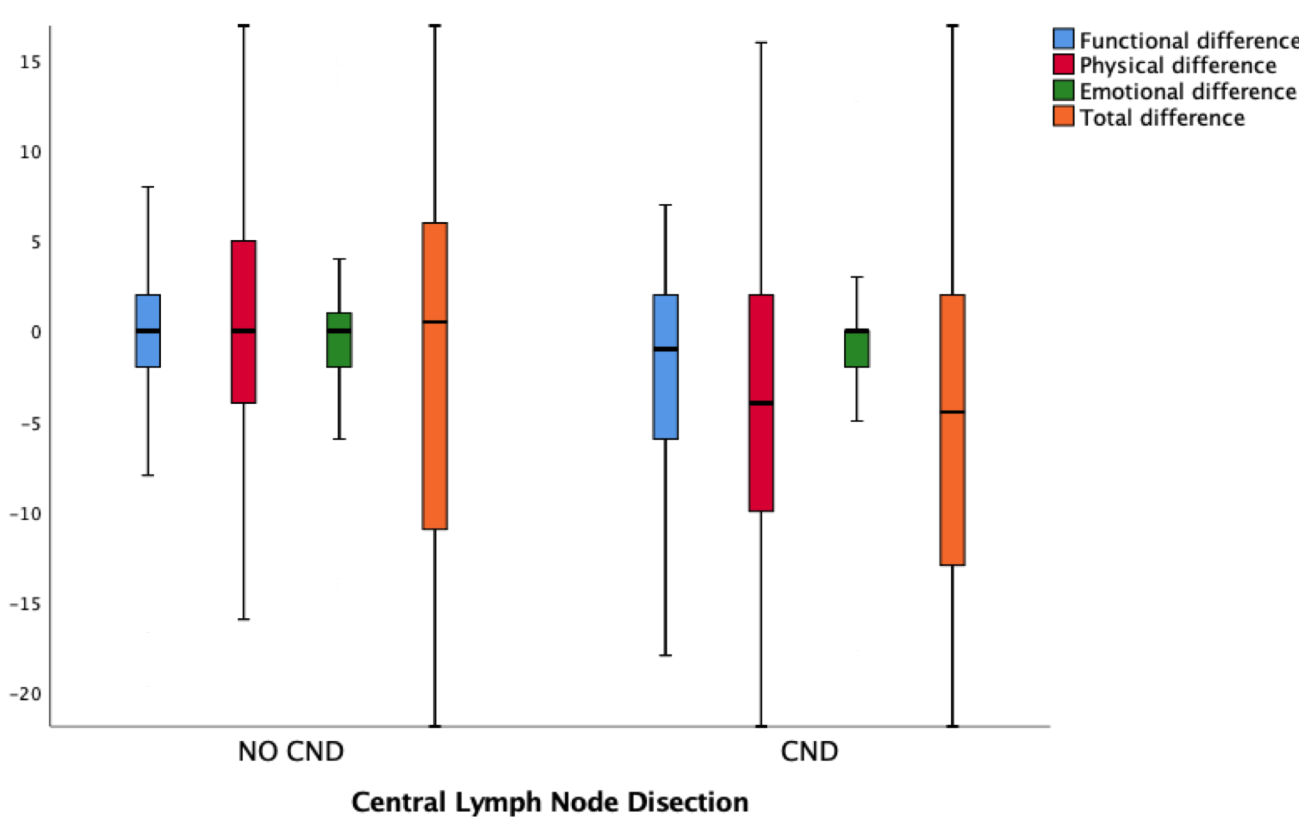
Domains	TT	SMT	CND
Functional	<b>0.013</b>	0.467	0.238
Physical	<b>0.007</b>	<b>0.058</b>	<b>0.040</b>
Emotional	<b>0.021</b>	0.271	0.680
Sum of domains	<b>0.005</b>	0.138	0.071

**Introduction:** By 90% of patients report voice changes after thyroidectomy even in the absence of vocal cord palsy (VCP). The aim of our study was to assess these changes with the Vocal Handicap Index (VHI-30) in patients with normal vocal cord function after total thyroidectomy. Secondly, we assessed risk factors among patients with these related VHI-30 changes.

**Materials and methods:** A pre-post test quasi experimental design study was performed including 92 thyroidectomized patients without VCP and 59 patients surgically treated (non-neck) under general anaesthesia were prospectively assessed with the VHI-30 questionnaire before and 2-weeks after surgery. Tied data was analysed and contrasted between groups. Demographic and Intraoperative variables were evaluated and stratified between groups. Statistical analysis was performed by IBM SPSS Statistics v21 considering a  $p < 0.05$  as significant for a two-tailed analysis.



**Results:** Some clinical and sociodemographic features between groups vs controls are displayed in table 1. Patients after total thyroidectomy reported higher median levels of VHI than controls, (3 [IQ 0-10] vs 0 [IQ 0-1] respectively;  $p < 0.01$ ) for functional domain, (6 [1-17] vs 1 [0-2];  $p < 0.01$ ) for physical, (0 [0-5] vs 0 [0-0];  $p < 0.01$ ) for the emotional and (9 [3-33] vs 1 [0-3];  $p < 0.01$ ) for the complete score. Same differences were statistically significant for their respective DELTAS. P values for these inferential contrasts are displayed in table 2. SMT was also significantly associated with higher median scores for physical (4 [0-16] vs 12 [3-23] respectively;  $p = 0.04$ ) and total score (7 [1-32] vs 16 [5-44];  $p = 0.03$ ) as displayed in fig. 1. Similarly, CND was also associated with higher physical dimension deltas (0 [-4.2-5] vs -4 [-10-2] respectively;  $p = 0.04$ ) as displayed in fig 2.



	Controls (n=59)	SMT		CND		Total (n=151)
		Yes (n=27)	No (n=65)	Yes (n=42)	No (n=50)	
Age	52 ± 16.2	47.5 ± 13.3	50.1 ± 14.1	45.7 ± 15.1	52.5 ± 12	50.4 ± 14.8
Female	36(61%)	22 (81.5%)	53 (81.5%)	32 (76.2%)	43 (86%)	111 (73.5%)
Length of Surgery	132.33 ± 54	160.3 ± 79.7	154.3 ± 49	168.4 ± 66	145.8 ± 51.4	151.2 ± 58.9
Bleeding	140.4 ± 57.3	165.5 ± 41.7	71.3 ± 132.9	120 ± 339.8	81.3 ± 146.5	98.9 ± 252.9
DEX	56 (94.9%)	24 (88.9%)	56 (86.2%)	39 (92.9%)	41 (82%)	136 (90.1%)