

EFFECTS OF CONTINUOUS INTRAOPERATIVE NERVE MONITORING ON VOICE AND SWALLOWING DISORDERS AFTER UNCOMPLICATED THYROIDECTOMY: A HIGH-VOLUME BI-INSTITUTIONAL PROSPECTIVE STUDY

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Summary Purpose: voice and swallowing troubles are frequently associated to thyroidectomy. Intermittent Nerve monitoring (i-IONM) seems to give positive effect in reducing its prevalence. Aim of this study was to test the hypothesis that continuous intraoperative nerve monitoring (c-IONM) may reduce the prevalence of these disorders even more than i-IONM. Methods: this 3-arms prospective bi-institutional study compares 179 consecutive patients that underwent thyroidectomy: 56 without IONM, 55 with i-IONM and 67 with c-IONM. Neck dissections and laryngeal nerve palsies were excluded. Two questionnaires (VHI-10 for voice disorders; EAT-10 for swallowing disorders, both validated for Italian language use) were administered before and 1 month after surgery. Patients also underwent a validated questionnaire investigating gastro-esophageal reflux symptoms. Statistical significance was analyzed by Chi-squared test. Results: the three groups were balanced in terms of age, sex, thyroid volume, extent of surgery and institution origin. After thyroidectomy, no statistically significant differences were found in the three groups concerning EAT-10, although these symptoms seem to be influenced from gastro-esophageal reflux. VHI-10 worsened in the “no-IONM” group compared with both i-IONM ($p < 0,09$, no quite statistically significant) and c-IONM ($p < 0,04$). Conclusion: both i- and c-

IONM improve voice quality independently from laryngeal nerve integrity. Reduced dissection and particularly restrained manipulation could explain these results, favourably especially for c-IONM.