Assessment of Recurrent Laryngeal Nerve Function during Thyroid Surgery

Content


Introduction: There is disparity in the reported incidence of temporary and permanent recurrent laryngeal nerve (RLN) palsy following thyroidectomy. Much of the disparity is due to the method of assessing vocal cord function. We sought to identify the incidence and natural history of temporary and permanent vocal cord palsy following thyroid surgery. The authors wanted to establish whether intraoperative nerve monitoring and stimulation aids in prognosis when managing vocal cord palsy.

Methods: Prospective data on consecutive thyroid operations were collected. Intraoperative nerve monitoring and stimulation, using an endotracheal tube mounted device, was performed in all cases. Endoscopic examination of the larynx was performed on the first postoperative day and at three weeks.

Results: Data on 102 patients and 123 nerves were collated. Temporary and permanent RLN palsy rates were 6.1% and 1.7%. Most RLN palsies were identified on the first postoperative day with all recognized at the three-week review. No preoperative clinical risk factors were identified. Although dysphonia at the three-week follow-up visit was the only significant predictor of vocal cord palsy, only two-thirds of patients with cord palsies were dysphonic. Intraoperative nerve monitoring and stimulation did not predict outcome in terms of vocal cord function.

Conclusions: Temporary nerve palsy rates were consistent with other series where direct laryngoscopy is used to assess laryngeal function. Direct laryngoscopy is the only reliable measure of cord function, with intraoperative monitoring being neither a reliable predictor of cord function nor a predictor of eventual laryngeal function. The fact that all temporary palsies recovered within four months has implications for staged procedures.