

## Thyroid Disorders 2016- Our experience in treatment of recurrent laryngeal nerve paralysis after Thyroidectomy

Aslan Ahmadi

Iran University of Medical Science, Iran

Recurrent laryngeal nerve paralysis, a common complication after Thyroidectomy depends on the kind of Thyroidectomy, unilateral or bilateral paralysis may occur. Anterior branch of RLN is in the posterior aspect of cricoThyroid joint so it can simply get injured in blind dissection of this area. After unilateral RLN injury, we have true vocal cord paralysis at the same side. In this category the patients have swallowing problem with voice disorder. Depends on the severity and the type of injury in the operation we can do some procedures with different approach. TVC medicalization with Cortex, cadaveric fascia, fascia late is the procedures of choice in selected patients in our experience. Especially we create a window in lower most border of Thyroid cartilage about 6-10 mm posterior to the anterior commissure. Injection of VOX under general anesthesia in paraglottic space with the special injector is the simplest procedure with good outcome. Neuromuscular pedicle transfer, reinnervation with nerve graft is the other procedure that we can do in this situation. Anyway the best result is in the primary surgery at the time of Thyroidectomy, that the surgeon should carefully dissect the nerve and prevent to damage the recurrent laryngeal nerve.

Intermittent laryngeal nerve (RLN) injury is a typical extreme intricacy in thyroid medical procedure, and one-sided RLN injury is progressively normal. With the expansion of mindfulness and the improvement of careful strategies, the occurrence of RLN injury has declined (about 0.5%~5% in the outside reports). One-sided RLN injury can cause shifting degrees of dryness, microaspiration, hacking and different side effects, truly influencing patients' personal satisfaction, and two-sided RLN wounds may actuate aphonia, dyspnea, and even asphyxia to compromise

the life of patients. RLN injury is likewise one of the significant purposes behind clinical contest from thyroid medical procedure. In this way, it is significant how to forestall and manage RLN injury during thyroid medical procedure. In this paper, the important clinical information of 623 patients who got thyroid medical procedure in our area of expertise from Jan 2010 to Dec 2012 were reflectively dissected, and the reasons for RLN injury in thyroid medical procedure and the anticipation experience were summed up. Presently the subtleties were accounted for as follows.

Over the most recent 25 years, complete thyroidectomy has supplanted respective subtotal thyroidectomy as the favored alternative for the administration of all patients with two-sided kind multinodular goiter, Graves' ailment, and everything except generally safe thyroid disease patients. The chief change in employable strategy has been the move from 'parallel dismemberment' to 'capsular dissection.'

The rate of injuries to the repetitive laryngeal nerve has been accounted for between 1% to 2% from various thyroid medical procedure places when performed by experienced neck specialists. This rate is higher when thyroidectomy is performed by a less experienced surgeon, or when thyroidectomy is accomplished for a harmful malady. In some cases the nerve is deliberately relinquished in the event that it runs into a forceful thyroid Cancer. In the current investigation, the pace of RLNI was 4.1%.

This inconvenience is commonly one-sided and transient, however sporadically it very well may be two-sided and changeless and it might be either conscious or accidental. The perpetual injury of harmed RLN frequently shows as an irreversible brokenness

of phonation and is the most well-known entanglement following thyroid surgery. Permanent wounds to the repetitive laryngeal nerve are best stayed away from by recognizing and cautiously following the way of the intermittent nerve. Surgeon's understanding, histopathologic conclusion, past thyroid medical procedure, careful strategy and anatomic varieties are significant elements influencing this complication.

Components of injury to the nerve incorporate total or incomplete transection, footing, or treatment of the nerve, wound, smash, consume, clasping, lost ligature, and traded off blood supply. In one-sided RLN, the voice becomes imposing in light of the fact that the vocal lines don't surmised with each other. Dysphonia beginning the second – fifth post-employable days is normally because of edema, though footing injury of the nerve and harm of axons may bring about dysphonia enduring as long as a half year. Dysphonia proceeding following a half year is regularly changeless brought about by cutting, ligating or burning of the nerve. Bilateral RLNI is considerably more genuine, on the grounds that both vocal lines may accept a middle or paramedian position and cause aviation route deterrent and tracheostomy might be required. Unintentional exchange normally happens at the degree of upper two tracheal rings, where the nerve intently approximates the thyroid projection in the region of Berry's ligament.

Notwithstanding numerous superb investigations, repetitive nerve analyzation has more than once been addressed in light of the fact that there was either no change or an expanded danger of vocal line loss of motion. A few of these investigations presumed that intermittent nerve analyzation isn't compulsory in subtotal resection yet at the same time advocate the method for training, that it will be valuable in confused cases (e.g., thyroid cancer). In our examination, the rate of RLNI expanded to 7.6% in situations where the nerve was not distinguished. Analyzation starting from the avascular cricothyroid space was accounted for as a sheltered technique for RLN preservation.

The improved result after complete analyzation can

be excused as follows; "absolute dismemberment of the intermittent nerve over its whole cervical course blocks a mistaken arrangement," it likewise permits the specialist to check the anatomic uprightness of the nerve and to distinguish extra-laryngeal implications. This circumstance is plainly better than fractional presentation of the nerve, an end that is likewise bolstered by the poor result of the specialists who just intend to recognizing the nerve.

As of late, numerous specialists have looked to attempt to additionally lessen the low rate of RLNI by utilization of nerve observing gadgets during medical procedure. Albeit a few gadgets have been used, all share for all intents and purpose a few methods for recognizing vocal string development when the repetitive laryngeal nerve is stimulated. Many little arrangement have been accounted for in the writing evaluating the potential advantages of checking to diminish the frequency of nerve injury. Given the low rate of RLNI, it isn't amazing that none of the examinations have demonstrated any factually noteworthy abatement in RLNI by utilizing a nerve screen. The utilization of a nerve trigger didn't help in anatomical analyzation of the RLN and was valuable in distinguishing just unrivaled laryngeal nerve. Broken nerve checking by incitement during complete thyroidectomy presents no undeniable advantage for the accomplished specialist in nerve recognizable proof, utilitarian testing or injury prevention.

Conscious distinguishing proof of the RLN limits the danger of injury. At the point when the nerve is distinguished and dismembered, the revealed RLN injury rate during thyroidectomy is 0 - 2.1%. This is supposedly higher in the re-usable setting (2-12%) or if the nerve isn't obviously distinguished (4-6.6%).

Intraoperative hemostasis and an intensive comprehension of the life systems are basic for nerve recognizable proof and preservation. RLNI is progressively basic in tasks for thyroid carcinoma, hyperthyroid (harmful) goiter and intermittent goiter cases. In repetitive goiter, wounds are because of attachments and anatomical uprooting though in hyperthyroid cases, it is because of expanded vascularization of

the gland.

In present examination, the pace of RLNI was 12.8% in thyroid carcinoma and in benevolent goiter cases, the transient RLN injury rate was 2.9%, and lasting in 0.33%. The rate was most noteworthy (21.7%) in repetitive goiter cases. Kind of surgery is another factor impacting the pace of RLN injury. In subtotal thy-

roidectomy cases RLNI rate was low while it is higher in absolute thyroidectomy cases.<sup>37</sup> In the current investigation, transient RLNI rate was 1.9% in subtotal contrasted with 7.2% altogether/close to add up to thyroidectomy. Table 3 exhibit some writing audit with respect to the occurrence of RLNI .