



SPEECH REHABILITATION AFTER THYROID SURGERY

Dr Shamsher Alam	Senior Resident, Department of surgical discipline, AIIMS New Delhi.
Dr. Piyush Ranjan*	Assistant professor, Department of surgical discipline, AIIMS New Delhi. *Corresponding Author
Dr. Kamal Kataria	Assistant professor, Department of surgical discipline, AIIMS New Delhi.
Dr. Dhritiman Maitra	Senior Resident, Department of surgical discipline, AIIMS New Delhi.
Kush Raj Lohani	Junior Resident, Department of surgical discipline, AIIMS New Delhi.

KEYWORDS :

Thyroid surgery is becoming increasingly common with advances in surgery and surgeons with different levels of training and expertise usually perform it. It has been noticed that around 40% have some form of voice changes thyroid surgery. 1/3 of them half can be attributed to nerve injury. Either there is neuropraxia or permanent nerve damage. Neuropraxia can be avoided by giving respect to the tissues, avoiding rough use of the sponges and using energy sources with minimum collateral damage. Doing careful dissection particularly at the berry ligament can prevent permanent damage. Permanent injury is fortunately uncommon, its around 1%. Voice problems include breathiness with loss of air during vocalization, change in pitch, inability to project the voice, and early vocal fatigue, any and all of which can impair communication. "Voice problems after thyroid surgery can significantly impair quality of life. Temporally voice change may persist up to one week. Appropriate voice utilization (avoiding overuse) and voice strengthening exercises promotes recovery. As a part of the treatment early exploration with nerve anastomosis have been tried with poor outcome. Interventions such as early speech therapy to injections in paralyzed vocal folds to more sophisticated procedures for vocal fold paralysis may allow patients in to function better. Early postoperative treatments may also reduce the requirement for future procedures for phonation.

POSTOPERATIVE RECOGNITION AND MANAGEMENT

Various degrees of unilateral or bilateral injury to the recurrent laryngeal nerves, external laryngeal nerves and superior laryngeal nerves may occur following Thyroid surgery, any of these injuries should be suspected if there is change of voice characteristics of a patient. In case of any doubt we should go for an opinion of an expert speech therapist. Role and timing of Indirect Laryngoscopy remains elusive. Although stroboscopy should be performed to visualize the anatomy and physiology of the vocal cords. The phonatory gap, mucosal waves and other parameters are noted. Speech therapy is planned according to the findings in a particular patient. The aim of speech therapy is to achieve maximal glottis adduction and reduction of the phonatory gap. In order to achieve various "push or pull isometric" exercises with simultaneous phonation are prescribed. We should encourage them to take deep breath, so that voice produced is strong. They should try to sit comfortably in a relaxed position with support, or lie down. They should take deep breath through your nose or mouth, feeling the lower area of the lungs should expand optimally with deep breaths. They should let the breath out with a soundless sigh. Deep breaths should not be taken endlessly, lest it causes fatigue, rather it should be at par with our normal respiratory rate. The patient is periodically evaluated clinically and with serial stroboscopy. If there is objective improvement the above is continued till satisfactory results are obtained. If desired results are not obtained then these measures are discontinued after six months and patients are prepared for interventions like- thyroplasty type 1 (medialisation of vocal cord)-

the commonest thyroplasty procedure required in this setting or b) submucosal fat injection in vocal cords.

VOCAL CORD EXERCISES

We should instruct the patient to keep relaxed as far as possible and should be aware of taking full supporting breaths, for making the voice sound as clear as possible, they should perform all these exercises which bring the two vocal cords together.

They should try a strong 'ah' sound, listening carefully to the beginning of the sound which should be as crisp and clear as possible. However, not enough force will leave the voice still sounding husky at the onset of the sound. 'Quality control' is the aim, maintaining as clear and strong a voice as they can. Precise vocal cord closure requires for all vowel sound, but replace 'u', which is a soft sound with the stronger 'ooh'. They should be encouraged to repeat each vowel three times and 'Uh-oh!' should be uttered again listening for a strong clear sound. Patient should be taught to Push the breath out making a 'sh' sound, without straining their throat as they do this. And then phrases, remembering to keep relaxed, and to be aware of their breathing; Arm in arm All in all, Up and away. Everybody out angry aunty and awful afternoon

This set of sounds should be repeated as often as they feel they can, aiming for at least three times a day, every effort should be made to keep the sound quality as precise and clear as they can.

In thyroid surgery patients, Surgeons need to realize the importance of evaluating voice. Much better outcomes can be achieved by keeping a low index of suspicion, early diagnosis and treatment. Physicians should not adopt a wait-and-watch approach." There is plethora of literature suggesting that voice disturbances occur in up to 80% of patients after they undergo thyroid surgery at least temporarily. In about 10% of patients, voice disturbance occur directly due to temporary (usually) and permanent (rarely) laryngeal nerve injuries after surgery, with some experiencing voice problems that exist for a long time after the procedure. These voice problems include inability to project the voice, change in pitch, breathlessness with loss of air during vocalization and early vocal fatigue, any and all of which can impair communication. After thyroid surgery "voice problem" can significantly reduce quality of life. Early diagnosis and treatment can result in much better outcomes.

CONCLUSION:

In thyroid surgery patients, surgeons need to realize the importance of evaluating voice. They also need to understand why certain voice changes occur. Patients should be encouraged by us to discuss their voice changes with their Surgeons and timely institution of Speech physiotherapy is imperative in tackling this menace.

REFERENCES

1. Endocrine. 2018; 61(2): 232–239. Published online 2018 May 5. doi: 10.1007/s12020-018-1614-4, PMID: PMC6061215 Voice quality preservation in thyroid surgery with neuromonitoring.
2. Beata Wojtczak, 1 Krzysztof Sutkowski,1 Krzysztof Kaliszewski,1 Zdzisław Forkasiewicz,1 Bartłomiej Knychalski,1 Michał Aporowicz,1 Marek Bolanowski,2 and Marcin Barczyński³
3. www.capitalregionspecialsurgery.com assessed on 15th jan 2019.