Content available at: https://www.ipinnovative.com/open-access-journals

IP Journal of Otorhinolaryngology and Allied Science

Journal homepage: https://www.joas.co.in/

Editorial

Microscope in Thyroid Surgery?

Manish Gupta [1,*]

[1] *Dept. of Otorhinolaryngology, Maharishi Markandeshwar Institute of Medical Sciences & Research, MMDU, Mullana, Ambala, Haryana, India*

ARTICLE INFO

Article history:
Received 12-07-2022
Accepted 16-07-2022
Available online 18-07-2022

Traditional thyroidectomy (TT) is done under top light illumination, with unaided vision. The microscopic thyroidectomy (MT) is done with visual magnification, though the operative technique remains the same.

Despite many innovations (radiofrequency, nerve stimulator) and meticulous dissection, thyroid surgery still carries the risk of complications, like hemorrhage, and damage to the laryngeal nerves and parathyroid glands.[1] Injury to parathyroids results in hypocalcemia, while injury to nerves may cause dysphonia (when unilateral) or stridor (bilateral injury).

The use of a microscope clearly defines the end artery blood supply to the parathyroid gland and aids to explore and identify the gland itself, thus helping in its preservation. In the study, identification of both internal and external branch of the superior laryngeal nerve could be done using the microscope.[2] The microscope also helps in the early identification of extra laryngeal branching of the recurrent laryngeal nerve and saving them.

Damage to recurrent laryngeal nerve and external branch of the superior laryngeal nerve, resulting in nerve palsies is lower in the microscopic thyroidectomy.[3] Hypocalcemia is also low as compared to traditional surgery.[3] The author's experience is that the MT takes slightly more time, but the bleeding is less. Though the comparative study finds no difference in operative time and bleeding.[3]

The operating microscope is usually present in the ENT operation theatre, and the ENT doctors are conversant (have good hand-eye coordination) in its use in Otology and Laryngology. Since the magnification can be varied depending upon the area of work, it is far better than the loupes. The author recommends the routine use of the microscope in thyroid surgery, especially during dissection near neuro-vascular structures and parathyroids to reduce morbidity, due to damage to these critical structures, as also suggested by the study.[4] Furthermore, it gives better dissection plane delineation and avoids any residual thyroid tissue, as is common at the ligament of Berry in TT. Thus, avoids recurrent thyroid surgery. Using the microscope, keeps the neck and shoulders upright, thus reducing the cervical problem, often seen in surgeons.[5] It is a great teaching and recording tool for juniors to learn the surgical steps under better illumination and magnification. The better patient outcome also avoids litigation, again common in thyroid surgery, and provides more confidence to the surgeon.

Conflict of Interest

None.

References

1. Christou N, Mathonnet M. Complications after total thyroidectomy. *J Visc Surg*. 2013;150(4):249–56. doi:10.1016/j.jviscsurg.2013.04.003.

* *Corresponding author*.
E-mail address: manishgupta1217@gmail.com (M. Gupta).

https://doi.org/10.18231/j.ijoas.2022.007

2. Kumar A, Tyagi AK, Varshney S, Malhotra M, Priya M. Microscopic thyroidectomy: a prudent option. *Indian J Otolaryngol Head Neck Surg*. 2019;71(2):212–7.
3. Gautam HK, Kumar V, Maurya D. A comparative study of thyroid surgery with and without a microscope. *Saudi J Otorhinolaryngol Head Neck Surg*. 2020;22(1):13–5. doi:10.4103/SJOH.SJOH_10_19.
4. Williams SP, Wilkie MD, Tahery J. Microscope-assisted thyroidectomy: our experience in one hundred and twenty-one consecutive cases. *Clin Otolaryngol*. 2014;39(5):307–11. doi:10.1111/coa.12284.
5. Davidson BJ, Guardiani E, Wang A. Adopting the operating microscope in thyroid surgery: safety, efficiency, and ergonomics. *Head Neck*. 2009;32(2):154–9.

Author biography

Manish Gupta, Professor & Head https://orcid.org/0000-0001-7784-308x

Cite this article: Gupta M. Microscope in Thyroid Surgery?. *IP J Otorhinolaryngol Allied Sci* 2022;5(2):24-25.