

## Airway management of patients undergoing oral cancer surgery: It is time to replace conventional Macintosh with videolaryngoscopes

Dear Editor,

Nasotracheal Intubation (NTI) is challenging in patients undergoing head and neck cancer (HNC) surgeries owing to reduced mouth opening, reduced submandibular compliance, and restricted space available for maneuvering the intubation devices.<sup>[1]</sup>

Traditionally awake fiberoptic bronchoscopy is considered gold standard for NTI. Macintosh laryngoscope has been used for NTI with its tip is placed in the vallecula to lift hyoepiglottic ligament maximally for best glottic view. However, this tends to increase malalignment between the nasally inserted endotracheal tube (ETT) and glottis.<sup>[2]</sup> Several maneuvers like cuff inflation, Magill's forceps, vascular forceps, head extension/rotation, and ETT rotation have been suggested to facilitate the success of NTI.<sup>[3,4]</sup> Magill may damage the ETT cuff and may lead to catastrophic bleeding through friable malignant tissue. The unique design of videolaryngoscopes (VLs) allows user to get a good glottic view without alignment of the three axis, reduces the strain on the oropharyngeal tissues improves the

glottic alignment of nasally inserted ETT, reduces the need of the maneuvers to guide the ETT into glottis and improves the overall success of intubation. Ambulkar *et al.* compared McGrath series 5 VL with a Macintosh laryngoscope for NTI in patients undergoing HNC surgery and found it VL provided improved first attempt success rates, reduced time to NTI and the need of maneuvers to align the ETT to glottic inlet.<sup>[5]</sup> However, they excluded patients using a non-validated predefined criteria that does not exclude the possibility of DA in its absence.<sup>[5]</sup> It is inappropriate to label the airway as normal in a patient with HNC as the proportion of difficulty contributed by individual factors cannot be judged. In addition, the submandibular compliance is often decreased (due to gutkha chewing, localized tumor or radiation therapy) and may make the maneuverability of VL difficult. But surprisingly there is no mention of submandibular compliance in the present article.

They have used a Cormack and Lehane (CL) grade for assessment of glottic views.<sup>[5]</sup> However, POGO score is preferred to grade glottic view with VL and a POGO of 50-60 (CL grade 2) may be sufficient for successful intubation. So, the use of CL grade to assess glottic view and targeting CL grade 1 to improve intubation success may not be the appropriate.

All VL have a learning curve and the results may not be same in inexperienced hands. Of the many VLs available, the use of those with Macintosh design like McGrath and CMAC comes intuitive to the anesthesiologist and may provide better results due to increased familiarity. The head and neck cancer patients may have a severely restricted

mouth opening (less than 2 cm) which may make it difficult to insert a VL for intubation and awake FOB may be the only choice for NTI.

In conclusion, VLs like McGrath are a good option for NTI in patients with head and neck cancer in experienced hands provided the mouth opening is sufficient for insertion of the device. However, we need further research base to conclusively recommend the routine use of VL for NTI in HNC patients with potential difficult airway.

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### Conflicts of interest

There are no conflicts of interest.

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### References

- Gupta N, Gupta A. Videolaryngoscope-assisted nasotracheal intubation: Another option! *J Anaesthesiol Clin Pharmacol* 2018;34:554-5.
- Goodine C, Sparrow K, Asselin M, Hung D, Hung O. The alignment approach to nasotracheal intubation. *Can J Anaesth* 2016;63:991-2.
- Gupta N, Garg R, Saini S, Kumar V. GlideScope video laryngoscope-assisted nasotracheal intubation by cuff-inflation technique in head and neck cancer patients. *Br J Anaesth* 2016;116:559-60.
- Yeom JH, Oh MK, Shin WJ, Ahn DW, Jeon WJ, Cho SY. Randomized comparison of the effectiveness of nasal intubation using a GlideScope video laryngoscope with Magill forceps versus vascular forceps in patients with a normal airway. *Can J Anaesth* 2017;64:1176-81.
- Ambulkar R, Ranganathan P, Savarkar S, Divatia JV. A randomized controlled trial comparing McGrath series 5 videolaryngoscope with the Macintosh laryngoscope for nasotracheal intubation. *Journal of Anaesthesiology Clinical Pharmacology* 2020;36:477-82.

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