

Video laryngoscopy-guided double-lumen tube insertion: Do we have enough evidence yet?

Dear Editor,

Double-lumen tube (DLT) is often needed for lung isolation during thoracic surgery and conventionally inserted using a direct laryngoscope (DL). It is technically more difficult to insert a DLT as it is longer, bulkier, and more rigid than the cuffed endotracheal tube (ETT). Therefore, one needs to have a good view of glottis (preferably Cormack Lehane (CL) grade 1) for successful intubation.^[1] In patients with suboptimal view of glottis (CL grade 3 or 4), blind attempts to DLT insertion may increase the intubation time, increase the number of attempts, and lead to complications like mucosal trauma and rupture of the trachea.

Videolaryngoscopes (VLs) are an important tool in anesthesiologists' armamentarium and provide a good view of glottis, without the need for alignment of oral, pharyngeal, and laryngeal axes.^[2] However, despite the better view of glottis, intubation success for DLT insertion varies depending upon the learning curve.^[3] Moreover, the amount of lifting force applied to obtain a good view of glottis is much lesser with a VL (7.6 N vs. 61N with DL).^[4] This leads to less distortion of the airway, making DLT insertion easier and reduces the associated trauma.

We read with interest article by Mathew *et al.*, who have reported that C-MAC VL improved the view of glottis, reduced the pressure applied on tongue but similar intubation times for DLT insertion in normal airways.^[5] This may be because they had used C-MAC VL which is similar to DL in design. But for intubation using VLs with a hyperangulated blade like C-MAC D blade, one needs to angulate the DLT with stylet to match the curve of VL blade for better intubation success, but this increases concavity of DLT which may make its rotation for navigation

into the desired bronchus difficult and increase malposition. VLs are inserted from midline without taking the tongue to one side which further reduces the potential space available for insertion of DLT and its navigation into the glottis and bronchus, especially in patients with reduced mouth opening. This may lead to cuff damage and Mathew *et al.* have also reported two incidences of cuff rupture.^[5] Most devices have their learning curve, and intubation times for DLT insertion may be further improved with continued usage and increased experience. We too have faced similar issues in our practice during our initial usage, but such negative events/outcomes reduced gradually after gaining experience with the technique. Most of the studies till date are on patients with normal airway, but the beneficial effects of VL on DLT insertion in difficult airway are yet to be elucidated. Another advantage of VL-guided DLT insertion is the possibility of training the residents in the technique of DLT insertion and fine manipulations.

Hence, VL should be considered for DLT insertion in patients with predicted normal airways. One needs more randomized trials, especially for DLT insertion in patients with difficult airway, to further recommend preferential use of VL for DLT insertion in all patients.

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Conflicts of interest

There are no conflicts of interest.

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