Nasopharyngeal airway as an aid to remove i-gel™ after endotracheal intubation through the device

Sir,

Supra-glottic airway device, i-gel™, is available in different sizes and has been used as a conduit for endotracheal intubation with or without fiberoptic assistance.[1] After tracheal intubation through i-gel™, safe removal of device will ensure proper fixation of endotracheal tube. Though conventional Intubating LMA is supplied with a silicone pusher to remove the device, no such aid is available with this airway. Sharma *et al*. described difficulty in removing the i-gel after endotracheal intubation.[2] Gabbot *et al*. suggested use of silicone pusher from the ILMA set to remove i gel.[3] Other authors have described use of esophageal dilator and 'Tube within the tube Assembly' to remove the device.[4,5]

We propose that Nasopharyngeal airway (NPA) serves as a useful aid to remove i-gel [Figure 1]. The clinical utility of NPA as a device to remove i-gel was evaluated in 20 ASA I-II adults (12 females/8 males) with normal airways where we electively used the i-gel to intubate the trachea in anesthetized and paralyzed patients. In 17 patients (85%), the device could be successfully inserted in the first attempt and in the remaining three patients, a second attempt was required. Correct placement of the device was confirmed by monitoring $EtCO_2$ tracing and by bilateral auscultation of chest. Endotracheal intubation through the i-gel airway was successful in 13 patients (65%) in the first attempt. In another three patients (15%), ETT could be successfully placed in the second attempt. In the remaining four (20%) patients, after two unsuccessful attempts, ETT was inserted using direct larygoscopy. The hemodynamic parameters like heart rate, systolic blood pressure, and diastolic blood pressure were well maintained perioperatively. In all 16 patients with successful intubation through the i-gel, size six NPA was used to remove the device. There were no complications like gagging, laryngospasm, bronchospasm or obstruction during insertion or removal of igel. These observations are comparable to the results of a study conducted by Halwagi *et al*., where first attempt success rate was 69% for i-gel group and 74% for ILMA group, and the overall success rate was 73% for i-gel group and 91 % for ILMA group.

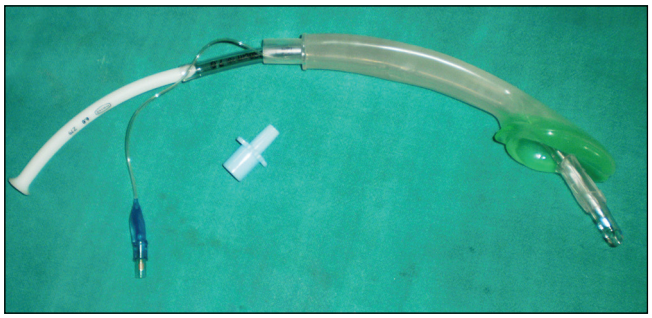

Figure 1: Nasopharyngeal airway used as a conduit for removal of i gel™ after successful endotracheal intubation

To summarize, ILMA is specifically designed for endotracheal intubation, and silicone pusher facilitates safe removal of device after intubation. But, it is expensive, supplied in adult sizes only, and may not be available in emergency suites. On the contrary, igel™ is a cost-effective, single-use, disposable supraglottic airway device, which is available in different sizes in the difficult airway cart. It's favorable alignment with the glottic inlet permits endotracheal intubation through the device, though the success rate is variable in the limited published data available.[6,7] Further trials are needed to find out the methods of improving endotracheal intubation success rate through the device and to validate the proposed technique of using NPA for safe removal of device after successful intubation.

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Quick Response Code:	Website: www.joacp.org
	DOI: 10.4103/0970-9185.142870