

A Comparative study of Oropharyngeal leak pressure in LMA Protector™ with cuff pilot vs LMA Supreme™ in paralysed patients: A prospective randomised clinical study.

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Background & Aims: Oropharyngeal leak pressure (OLP) is the pressure at which a gas leaks around the airway, higher leak pressures, better seal. Our primary aim was to measure OLP and Secondary aims were to measure Insertion Time, Numbers of Attempts, Ease of Insertion, and Postoperative complications.

Methods: The study was carried out in 62 adult patients of ASA I & II which were randomized into 2 groups Group S (LMA Supreme™) and Group P (LMA Protector™) (n = 31 each) based on a computer-generated random sequence table.

Respective LMA's were inserted after general anaesthesia induction and OLP were measured at cuff pressure of 60 cmH₂O in each group accordingly. Secondary Parameters such as insertion time, no of attempts of supraglottic airway devices and gastric tube, ease of insertion were measured. Intraoperative haemodynamic parameters and postoperatively airway morbidity were also measured.

Results: OLP were significantly higher (P<0.0001) for LMA Protector™ compared to LMA Supreme™. The OLP in LMA Protector™ group was 28.12 cmH₂O (SD- 1.96) compared to 21.5 cmH₂O (SD- 2.65) in LMA Supreme™ group. Insertion time was significantly higher for the LMA Protector™ (24.58 sec) compared to the LMA Supreme™ (16.67 sec) (P<0.0001). There were no statistically significant differences in ease of insertion, Numbers of Attempts, trauma, sore throat, Dysphagia and Dysphonia.

Conclusion: Oropharyngeal leak pressures were consistently higher (>5 cm H₂O) for LMA Protector™ compared to LMA Supreme™, Thus providing effective ventilation than LMA Supreme™.

References

1. Berthold Moser¹ | Christian Keller¹ | Laurent Audig² | Heinz R. Bruppacher¹. Oropharyngeal leak pressure of the LMA Protector™ vs the LMA Supreme™; a prospective, randomized, controlled clinical trial; Acta Anaesthesiol Scand 2019; 63:322-328.
2. Jee-Eun Chang¹, Hyerim Kim¹, Jung-Man Lee¹, Seong-Won Min^{1,2}, Dongwook Won¹, Kwanghoon Jun³ and Jin-Young Hwang^{1,2*} A prospective, randomized comparison of the LMA-protector™ and i-gel™ in paralyzed, anesthetized patients • Chang et al. BMC Anesthesiology 2019; 19:118