A comparison of airway trauma following laryngoscope-assisted and standard laryngeal mask airway insertion techniques.

Spijkerman S, Basson NM; University of Pretoria, South Africa

INTRODUCTION

- Airway morbidity with laryngeal mask airways (LMAs) impacts patient satisfaction.
- The safety profile of newer generation LMAs has improved.
- First generation devices are however still used in the developing world.
- This study assessed airway morbidity following laryngoscope-facilitated vs standard technique LMA placement.

METHODS AND MATERIALS

- Ethics committee and patient consent obtained.
- Double-blind, randomised controlled trial.
- One hundred ASA I or II, non-obese, adult patients with no airway pathology or bleeding disorders were recruited.
- Patients for elective surgery of 30 – 120 minutes duration under general anaesthesia with LMA, were randomized into the S (standard technique) or L (Laryngoscope-assisted placement) group.
- Standard anaesthetic administered (sufentanil $0.1 \mu\text{g}.\text{kg}^{-1}$, propofol $2\text{mg}.\text{kg}^{-1}$, sevoflurane 2% in 50% oxygen and air).
- Correctly sized Unique™ LMAs were lubricated and placed by a single operator.
- Cuff pressures were maintained at 30 cmH_2O .
- The presence of sore throat, hoarseness and other trauma were recorded directly postoperatively and after 24 hours by a second, blinded investigator.

RESULTS

- Sample size of 98 patients required.
- Groups comparable for age, sex, Mallampati score and duration of surgery.
- Fisher's exact test found statistically significant differences between groups:

	Group S	Group L	P-Value	Risk ratio (95% CI)
Sore throat	38%	10%	0.002	0.27 (0.11-0.66)
Hoarse	24%	6.1%	0.02	0.26 (0.08-0.85)
Other trauma	16%	2%	0.03	0.13 (0.02-0.98)

Incidence of airway morbidity after Unique LMA placement with standard (S) and laryngoscope-assisted (L) techniques

DISCUSSION

- Macintosh laryngoscope-assisted placement of Unique™ LMAs can reduce airway morbidity.
- Previous studies employed different devices and laryngoscopy techniques.
- Laryngoscopes are readily available and cost-effective but can cause trauma. They should be used to displace the tongue while not touching the vallecula.
- This study was limited to ASA I and II, non-obese patients and to Unique™ LMAs. Further research required for other groups.