

# Ambu Laryngeal Mask v Classic LMA

## a cross-over trial



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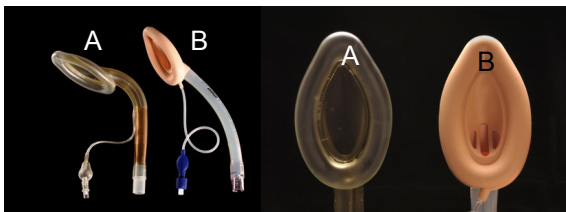
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### Introduction

There is potential infection risk with prion disease such as variant Creutzfeldt-Jakob disease associated with the use of reusable airway equipment.<sup>1</sup> This has led to an increase in disposable airway equipment in the market. Laryngeal masks have been no exception. The performance of these disposable laryngeal masks may vary. We compared the Ambu laryngeal mask(A) with the Classic laryngeal mask airway(B) in our study.



### Methods

After Ethics Committee approval and written informed patient consent, we recruited 45 patients of ASA 1-3 category to participate in this cross-over trial. Patients received a standard total intravenous general anaesthetic. After ensuring adequate depth of anaesthesia by checking jaw relaxation, the Ambu laryngeal mask and the Classic LMA were inserted one after the other in random order. After insertion of the laryngeal masks, 5 ml increments of air were used to inflate the cuff until a good seal was obtained. Good seal was assessed by bag ventilating while leaving the APL valve at 10 cm H<sub>2</sub>O and listening for absence of any audible leak and looking for a square waveform on capnography. When a good seal was obtained, the cuff pressure was measured and recorded. An attempt at insertion was considered successful if successful ventilation was achieved after insertion. After successful insertion, the user scored the ease of insertion on a 100mm visual analogue scale. (0 = impossible; 100 = very easy)

### Results

We recruited 45 patients (M:F 20:25) with a mean age of 44 yrs (21 – 77) and mean BMI of 25 kg/m<sup>2</sup>.

**Table 1.** First attempt insertion success rate

	Ambu LM		
	success	failure	Total
Classic LMA	33	1	34 (76%)
	6	5	11 (24%)
Total	39 (87%)	6 (13%)	45

$p = 0.13$  (McNemar test)

Ease of insertion (*expressed as median [IQR]*)

Ambu LM 86 [76-93]

Classic LMA 85 [59-89]

$p=0.033$  (Wilcoxon signed rank test)

**Table 2.** Cuff volume required to produce good seal

Frequency	Volume added (ml)				
	5	10	15	20	25
Ambu LM	18	18	8	1	0
Classic LMA	15	23	2	4	1

$p = 0.37$  (Wilcoxon signed rank test)

Cuff pressure at good seal (*expressed as median [IQR]*)

Ambu LM 19 cm H<sub>2</sub>O [11-31]

Classic LMA 27 cm H<sub>2</sub>O [17-47]

$p=0.015$  (Wilcoxon signed rank test)

### Conclusion

The first attempt insertion success rate with Ambu LM is similar to Classic LMA. However, Ambu laryngeal mask appears to have better ease of insertion compared to Classic LMA.

The median volume of air required to achieve a good seal with either laryngeal mask was 10 ml.

### Acknowledgements

We would like to thank Ambu Ltd., UK for supplying the Ambu laryngeal masks for the study.

### References

1. Hirsch N. *Anaesthesia*; 2005; **60**, 664-7.