

# Unique™ Laryngeal Mask airway versus Cobra™ Perilaryngeal airway: Learning curves for insertion

NV Muller, AA Alberts

---

## Introduction

Both the Unique™ LMA, and lately the Cobra™ PLA, is available in most of the larger state hospitals in South Africa. This study's objective is to evaluate and compare the learning curves for insertion of these two single-use airway devices. This is to ascertain which of these two devices is easier and safer to insert, in the shortest possible training time, for junior doctors.

## Methods

100 patients scheduled for elective minor surgery were randomised into 2 groups, those receiving the Unique™ LMA (U) and those receiving the Cobra™ PLA (C). Only patients where management of anaesthesia would have included the use of a supraglottic airway device were included in the study. Both groups received the same premedication, induction and maintenance of anaesthesia. Intern medical doctors that have never inserted either an LMA or a PLA were used to plot the learning curves for the two devices. Ten doctors were used and randomly allocated to either insert an LMA or a PLA in 10 patients. Factors plotted on the learning curves were

- (1) number of attempts at placement
- (2) time to successful placement (from starting the placement procedure to adequate  $\text{ETCO}_2$  on capnograph)
- (3) local trauma caused by insertion (dipping the device into set

amount of water post-procedure and using a "dipstick" reading for blood)

## Results

Total number of attempts of insertion with Group C was 1.20, compared to 1.06 for Group U.

Total average time for insertion with Group C was 58.3 seconds, compared to 47.6 seconds for Group U.

Total average trauma score for insertion with Group C was +1.60, compared to +1.36 for Group U.

Successful insertion was achieved faster with every attempt (number 1 through 10) with Group U.

However, it seems that none of the devices instil "memory" in the doctors that make subsequent insertions easier to perform, i.e. they didn't perform later insertions significantly faster than the first attempt.

## Discussion

It is clear that the Unique™ LMA was easier to insert for novice doctors, with less trauma caused and in a shorter time. However, neither of the devices had significantly reduced insertion times in subsequent attempts. Individual patient characteristics probably play a more important role as a cause of this outcome, rather than incompetence on the doctors' part or substandard devices.