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Clinical Evaluation of a New Disposable Airway Device The Ambu™ Laryngeal Mask™

Background and Goal of study:

The major interest of single use airway devices is the prevention of transmission of infectious agents.

The Ambu™ Laryngeal Mask is a new disposable supraglottic airway device. It consists in a pre-angled moulded airway tube to fit the anatomical structure of the patient's throat.

The goal of this prospective open study was to evaluate the Ambu™ Laryngeal Mask for airway management during elective surgery.



Materials and Methods:

After ethics committee approval and written informed consent, 60 adult patients, ASA grade 1-2, scheduled for short-lasting anaesthesia were studied. Patients with BMI > 30·kg·m⁻² or predicted difficult airway were excluded.

After induction of anaesthesia, Ambu™ Laryngeal Mask (size 4 or 5) was inserted in strict accordance with the manufacturer's recommendations. Three attempts were allowed. The proper position of the device was checked by easy bag ventilation without leak and presence of a capnogram with a plateau. The lungs were ventilated with volume-controlled ventilation. Tidal volume was set at 10 mL·kg⁻¹, the respiratory rate at 12 min⁻¹ and the inspiratory / expiratory ratio at 1:2. The fresh gas flow was set at 1,5 L·min⁻¹ (O₂/air 1/1).

Success and insertion time, oropharyngeal leak pressure, peak airway pressure, per and postoperative side effects were recorded. Results given are the median (25-75%) or the mean (± SD) when data were normally distributed.

Results and Discussions

The median age, height and weight were 39.6yr (21-63), 172cm (155-198) and 78kg (54-98), respectively. Insertion was successful in 59 patients (98.3%) (first attempt n=51, second n=6, third n=2).

The mean insertion time, oropharyngeal leak pressure, peak airway pressure were 27 (±6) s, 23 (±5.8) cmH₂O and 14.3 (±3) cmH₂O respectively.

Neither desaturation nor gastric insufflation were noted. Occurred bloodstain was found in only two (3%) cases.

Conclusion : The Ambu™ Laryngeal Mask is a non-traumatic, easily inserted and efficient device to perform volume-controlled ventilation.

These results are similar to preliminary results reported for Laryngeal mask airway Unique™ or Soft Seal™ laryngeal mask (*Anesth Analg* 2004; 99: 1560-3).

Further comparatives studies are needed to compare the Ambu™ Laryngeal Mask with other disposable supraglottic airway devices