

## **Comparison of LMA-Unique and SoftSeal for ventilation in patients undergoing short gynaecologic interventions**

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**Background and Goal of Study:** LMA-Unique (LMU, LMA Company) and SoftSeal (SS, Portex) are two single-use laryngeal mask airways that can be used for ventilation during elective interventions. The two devices are compared for ease of insertion and quality of airway seal in a prospective clinical trial.

**Materials and Methods:** After obtaining approval of the local ethics committee and patient consent, 30 women scheduled for elective short gynaecologic interventions, were randomized to be ventilated with either LMU or SS. After induction of general anaesthesia with fentanyl and propofol, airway devices were placed according to manufacturer's instructions. Number of attempts (maximum 2), insertion time, time until first tidal volume and intraoperative tidal volumes with an etCO<sub>2</sub> of 35 mmHg were recorded. Airway leak pressure was measured with cuff pressures set to 60 cmH<sub>2</sub>O. After removal, devices were inspected for traces of blood and patients were questioned for hoarseness or soar throat.

**Results and Discussions:** 15 women were ventilated with LMU and 15 with SS.

Demographic data as well as baseline heart rate, blood pressure and peripheral oxygen saturation were comparable for both groups, mean age was 33.7(±12) years for LMU and 41.1(±18) years for SS. Insertion was successful in all patients, a second attempt was necessary in 2 patients with LMU and 1 patient with SS. Insertion time and time until first tidal volume were 15.4(±5.7)/17.2(±13.1) and 21.8(±8.5)/27.1(±13.4) seconds for LMU/SS. Peak airway pressures were 16.0 and 17.1 cmH<sub>2</sub>O with tidal volumes of 8.9 and 8.0 ml/kg for LMU and SS. Airway leak pressure with SS was higher than with LMU: 23.6(±4.4) vs. 20.9(±2.0) cmH<sub>2</sub>O (p=0.025). Anaesthesia time was 36.1 min for LMU and 41.7 min for SS. Traces of blood after removal were found in 1 SoftSeal patient. Mild complaints (2 on a ten point VAS scale) of trouble swallowing were stated in the recovery room and after 24 hours by one patient in the LMU group.

**Conclusion(s):** Both laryngeal mask airways allow sufficient ventilation in the patients studied. The airway leak pressure, serving as an estimate to judge quality of airway seal, is higher with the SoftSeal laryngeal mask.

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