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Comparison of the Baska and I-gel supraglottic airway devices: a randomized controlled study

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BACKGROUND: Laryngeal masks are increasingly used in place of endotracheal intubation or face masks for maintaining the airway during surgery.

OBJECTIVES: Compare the insertion time and other features of the Baska and I-gel masks in patients undergoing general anesthesia for urological surgery.

DESIGN: Randomized-controlled, single-blind study.

SETTINGS: Urology surgical operating rooms of a tertiary care hospital.

SUBJECTS AND METHODS: We enrolled concomitant patients whose surgery was expected to last less than two hours. Following premedication and adequate relaxation, subjects were randomly allocated to the I-gel mask or the Baska mask. Computer-generated random numbers were used for randomization with sealed opaque envelopes for allocation concealment.

MAIN OUTCOME MEASURES: The primary outcome measure of the study was the time required for laryngeal mask airway (LMA) insertion. Also, the number of device placement attempts, the number of postoperative signs and symptoms (cough, breath holding, laryngeal spasm, lip trauma, blood on the mask), and laryngopharyngeal morbidity scores at 1 and 24 hours postoperatively.

SAMPLE SIZE: 211 met inclusion criteria, 200 participants completed the study.

RESULTS: Compared to I-gel, the Baska mask required a longer time for insertion, and its airway pressure was higher. The median (minimum-maximum) duration of LMA insertion in the Baska and I-gel groups was 14 (6-25) and 7 (5-12) seconds, respectively (z=-10.934; *P*<.001).The mean (SD) airway pressures were significantly different between the two groups (15.8 [1.9] and 14.9 [1.7] cm/H_2O for Baska and I-gel, respectively; t=3.668; *P*<.001). Seal pressure was not significantly different between the groups (0.08 [0.2] vs. 0.07 [0.2] cm/H_2O in the Baska and I-gel groups, respectively, (t=1.35; *P*=.194).

CONCLUSIONS: The Baska and I-gel masks are similar in most respects. Both have reasonably acceptable insertion times and can be used for selected surgical procedures.

LIMITATIONS: The requirement for more vigorous training is a limitation of the Baska mask. Results could differ with patients younger than 18 years of age or obese patients.