

Effectiveness of the New Perilaryngeal Airway (CobraPLA™) in Comparison with the Laryngeal Mask Airway (LMA™) to Improve Airway Sealing Pressures among Obese and Overweight Patients

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Abstract : Objective: The study was aimed to evaluate the applicability of the Cobra Perilaryngeal Airway (Cobra PLATM) for patients under general anesthesia and also compare result with the Laryngeal Mask Airway (LMA). Methods: Seventy three obese and overweight patients were included in the study. The patients were randomly assigned to either LMA or Cobra PLATM. Time required for intubation, successful intubation attempt, airway sealing pressure, the incidences of complications including blood staining, sore throat and dysphagia were assessed and noted. Results: Thirty six and thirty seven patients were allocated randomly to either LMA or Cobra PLATM, respectively. Most of the patients were male and were in Mallampati Class II airway in both groups. The first attempt and overall insertion success for the Cobra PLATM was significantly more frequent compared to the LMA ($p < 0.05$). Tube insertion was more successful (Cobra PLATM, 94%; LMA™, 77%; $P = 0.027$) with the Cobra PLATM. The insertion times were similar with the Cobra PLATM and LMA™ (Cobra PLATM, 29.94 ± 16.35 s; LMA™, 27.00 ± 7.88 s). The airway sealing pressure in the Cobra PLATM (24.80 ± 0.90 H₂O) was significantly more than LMA™ (19.13 ± 0.58 H₂O, $p < 0.001$). Sore throat was more frequent in the LMA™ groups that did not reach statistical significance (Fisher's exact test, $P = 0.33$). Incidences of blood staining on airway tube were seen for both groups that was higher in the Cobra PLATM group (Fisher's exact test, $P = 0.02$). Incidence of dysphagia was not different between the two groups. Conclusion: The CobraPLA™ was found to be safe and low complications, better airway sealing and high rate of the first insertion success for suing in obese and overweight patients. The study recommended using the CobraPLA™ as a rescue device in an emergency situation among obese and overweight patients.

Keywords : CobraPLA™, flexible laryngeal mask airway, obese patients, perilaryngeal airway

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