

Comparison of the Haemodynamic Response to Laryngoscopy and Endotracheal Intubation with Etomidate versus Propofol-Ketamine and Thiopentone-Ketamine in Lumbar Spine associated Surgery: A Randomized Interventional Study

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Abstract

Background: Laryngoscopy and endotracheal intubation is commonly used for securing airway during general anaesthesia but it's associated with stress response induced hemodynamic disturbances. We aimed to determine the difference in haemodynamic variables during laryngoscopy and endotracheal intubation with Etomidate versus Propofol-ketamine and thiopentone-ketamine as induction agent in elective lumbar spine associated surgery. **Material and Methods:** It was a Prospective randomized comparative interventional study on total 111 patients, aged 25-60 years of either sex with ASA physical status I and II who were randomly allocated into three groups (37 in each group). **Group A:** Received inj. Etomidate 0.3 mg/kg IV, **Group B** received inj. Propofol 1.5 mg/kg IV + inj. Ketamine 0.5 mg/kg IV, **Group C** received inj. Thiopentone 3 mg/kg + inj. Ketamine 0.5 mg/kg IV; at induction of anaesthesia. Haemodynamic parameters (SBP, DBP, MAP, and HR) were noted at baseline, after induction, just before intubation, and 1, 3, 5, 10 and 15 min after intubation. Side effects like myoclonus, post-operative nausea and vomiting (PONV) and hallucinations were also noted. Statistical analysis was performed using ANOVA test and chi-square test ($P \leq 0.05$ significant). **Results:** Hemodynamic parameters were increased in all groups after intubation and was minimum in Group B compared to Group A and C at one min post intubation. Myoclonus and PONV were observed more in Group A than Group B and C (statistically nonsignificant in all three groups). **Conclusion:** Propofol-ketamine combination is a safe and effective induction agent with better hemodynamic stability as compared to Etomidate and thiopentone-ketamine in general anaesthesia.

Keywords: Myoclonus, Post-Operative Nausea and Vomiting, Hallucination, Airway