

Turkish Journal of Medical Sciences

Turkish Journal

of

Medical Sciences

Effects of Esmolol on Hemodynamic Responses to Laryngoscopy and Tracheal Intubation in Diabetic Versus Non-Diabetic Patients


Taner TAŞYÜZ

İsmet TOPÇU

Sabri ÖZASLAN

Melek SAKARYA

Department of Anesthesiology and Intensive Care, Faculty of Medicine,
Celal Bayar University, Manisa - TURKEY

 [Keywords](#)

 [Authors](#)



medsci@tubitak.gov.tr

[Scientific Journals Home Page](#)

Abstract: Aim: We aimed to investigate the efficiency of esmolol, a short-acting β -blocker, in preventing the hemodynamic response to laryngoscopy and endotracheal intubation in diabetic patients. Materials and Methods: Eighty diabetic or non-diabetic patients with ASA physical status I-II scheduled for noncardiac surgery were included in this study. They were divided randomly into 4 groups (Non-diabetic control: NDC, Non-diabetic esmolol: NDE, Diabetic control: DC, Diabetic esmolol: DE). Blood glucose analyses were measured in the preoperative period and at the 10th min of the study. Prior to anesthetic induction, 1 mg/kg esmolol to Groups NDE and DE and saline to Groups NDC and DC were administered in 1 min by slow infusion. After 2 mins, systolic and diastolic arterial blood pressures (SBP, DBP), heart rate (HR), bispectral index (BIS) and peripheral oxygen saturation (SpO₂) were recorded in all groups. Laryngoscopy and endotracheal intubation were performed after induction. SBP, DBP, HR, SpO₂ and BIS values were recorded every minute during 10 mins after intubation. Results: In Groups NDE and DE, SBP, DBP and HR values were significantly lower after drug administration than the values obtained before drug administration ($p<0.05$). In Groups NDC, NDE and DC, SBP, DBP and HR values were significantly higher in the first minute of the intubation compared to before drug administration ($p<0.05$), but were significantly low in subsequent measurements ($p<0.05$). Blood glucose analyses were found significantly higher in Group NDE than Group NDC ($p<0.05$). Conclusions: We propose that esmolol might be used effectively to control hemodynamic response to tracheal intubation in diabetic patients. We also determined that esmolol causes no difference in blood glucose levels.

Key Words: Esmolol, laryngoscopy, intubation, diabetics

Turk J Med Sci 2007; **37**(5): 289-296.

Full text: [pdf](#)

Other articles published in the same issue: [Turk J Med Sci,vol.37,iss.5.](#)