

Comparison of Dexmedetomidine, Lignocaine, and their combination in attenuation of cardiovascular responses to tracheal extubation in controlled hypertensive patients

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Abstract

Background & Aims: Tracheal extubation is associated with acute, transient, significant and undesirable hemodynamic and airway responses that may persist into the recovery period. This study was designed to compare the efficacy of dexmedetomidine plus lignocaine with each drug alone in suppressing the hemodynamic changes during extubation in controlled hypertensive patients in elective ENT surgeries. **Material and Method:** In this double-blind randomized study 80 adult patients of age 18 years to 60 years of either sex belonging to ASA grade II having SBP >160 mmhg and/ or DBP >90 mmhg prior on preoperative visit undergoing elective ENT surgeries were randomly divided into 4 groups: Group D received dexmedetomidine [0.1 mcg/kg] iv, Group L received Lignocaine [1mg/kg] iv, Group D+L received Dexmedetomidine [0.1 mcg/kg] iv+ Lignocaine[1mg/kg] iv and Group C received Normal Saline iv before reversal. Hemodynamic parameters in form of heart rate, systolic and diastolic blood pressure, mean arterial pressure, rate pressure product, oxygen saturation was recorded at 1,2,3,5,10 min after extubation. Any side effects during study were noted. **Results:** It was found that heart rate, mean arterial pressure, rate pressure product increased temporarily after tracheal extubation in patients receiving Lignocaine. However, these hemodynamic responses were completely inhibited in those receiving Dexmedetomidine plus lignocaine, but suppressed to some extent with Dexmedetomidine group alone. **Conclusions:** Dexmedetomidine plus lignocaine is an effective and safe prophylaxis for attenuating the cardiovascular responses to tracheal extubation in hypertensive patients and is superior to each drug alone. Dexmedetomidine alone suppressed the hemodynamic variables and airway reflexes comparable to combination group.

Keywords: Dexmedetomidine, lignocaine, tracheal extubation, hypertensive patients