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## Comparative evaluation of esmolol and dexmedetomidine for attenuation of sympathomimetic response to laryngoscopy and intubation in neurosurgical patients

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**Background:** The present study compared the efficacy of esmolol and dexmedetomidine for attenuation of the sympathomimetic response to laryngoscopy and intubation in elective neurosurgical patients. **Materials and Methods:** A total of 90 patients aged 20–60 years, American Society of Anesthesiologists physical status I or II, either sex, scheduled for elective neurosurgical procedures were included in this study. Patients were randomly allocated to three equal groups of 30. Group control (group C) 20 ml 0.9% saline intravenous (IV), group dexmedetomidine (group D) 1 mcg/kg diluted with 0.9% saline to 20 ml IV and group esmolol (group E) 1.5 mg/kg diluted with 0.9% saline to 20 ml IV. All the drugs were infused over a period of 10 min and after 2 min induction of anaesthesia done. Heart rate (HR), systolic blood pressure, diastolic blood pressure, and mean arterial pressure were recorded baseline, after study drug administration, after induction and 1, 2, 3, 5, 10, and 15 min after orotracheal intubation. **Results:** In group D, there was no statistically significant increase in HR and blood pressure after intubation at any time intervals, whereas in group E, there was a statistical significant increase in blood pressure after intubation at 1, 2, and 3 min only and HR up to 5 min. **Conclusion:** Dexmedetomidine 1 mcg/kg is more effective than esmolol for attenuating the haemodynamic response to laryngoscopy and intubation in elective neurosurgical patients.

## Comparison of outcome using propofol or desflurane for aneurysm neck clipping surgeries following subarachnoid haemorrhage

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**Background:** Surgery for aneurysm neck clipping after SAH poses a unique anaesthetic challenge but data on the influence of anaesthetic agents in this subset of patients is lacking. **Materials and Methods:** 70 patients in WFNS grade I and II were randomized into Propofol ( $n = 35$ ) and Desflurane group ( $n = 35$ ). Anaesthesia was maintained with Propofol and fentanyl infusion in one group and Desflurane and fentanyl infusion in the other group. Jugular bulb catheter was inserted in selected patients to compare  $SjVO_2$ . Brain relaxation was assessed intraoperatively. Time to eye opening, extubation and following verbal commands were noted from the time of stopping the anaesthetic agent. Subsequently patients were compared for hospital stay after clipping and condition at the time of discharge as assessed by Modified Rankin Scale (MRS). Patients discharged in MRS 0–1 were considered as good outcome. **Results:** Hospital stay was  $11.7 \pm 8$  days in the propofol group and  $12.6 \pm 9.2$  days in the desflurane group ( $P = 0.671$ ). 18 patients (54.5%) ( $N = 33$ ) in the propofol group and 14 patients (45.2%) ( $N = 31$ ) in the desflurane group had a good outcome ( $P = 0.453$ ). No difference was noticed in terms of brain relaxation, time to eye opening, extubation and following verbal commands ( $P > 0.05$ ). Emergence hypertension was more in the desflurane group ( $P = 0.007$ ). After dura opening and post clipping,  $SjVO_2$  values were significantly higher in the desflurane group ( $P < 0.05$ ). **Conclusion:** Both propofol and desflurane are comparable in terms of outcome of patients undergoing surgery for aneurysm neck clipping after SAH (WFNS I and II patients).