

BACKGROUND:

Endotracheal extubation can be associated with hypertension, tachycardia, arrhythmias, myocardial ischemia, raised intracranial pressures due to sympathetic stimulation.

AIM:

To compare the efficacy of intravenous dexmedetomidine with intravenous fentanyl to decrease the stress response to tracheal extubation in patients undergoing elective general surgeries.

MATERIALS AND METHODS:

180 patients of either sex, ASA grade I -II normotensives, aged 18-65 years undergoing elective general surgeries of 60-180 minutes duration under general anaesthesia were randomized into 3 groups. Anaesthetic technique was standardized. Patients in Group N, F and D received intravenous infusion of 100 ml of 0.9% normal saline, Fentanyl 1 μ g/kg and dexmedetomidine 0.5 μ g/kg respectively 10 minutes before extubation for a period of 10 minutes. Heart rate, systolic blood pressure, diastolic blood pressure, mean arterial pressure and SPO₂ were recorded before, during and after extubation.

RESULTS:

Lesser increase in heart rate, systolic blood pressure, diastolic blood pressure and mean arterial pressure were noted after extubation in dexmedetomidine group than the fentanyl group which were statistically significant. Extubation quality was better with dexmedetomidine group. Ramsay sedation and aldrete scores were similar in all 3 groups. Hypotension and bradycardia were more with dexmedetomidine group than the fentanyl group but none required intervention.

CONCLUSION:

Dexmedetomidine 0.5 μ g/kg infusion administered 10 minutes before tracheal extubation was better compared to fentanyl 1 μ g/kg infusion in attenuating the hemodynamic stress response with comparable adverse effects. Hence, dexmedetomidine infusion can be a safer alternative to fentanyl infusion for attenuating extubation stress response.

KEYWORDS: Dexmedetomidine, fentanyl, extubation quality, hemodynamic response.