Role of dexmedetomidine pre-medication on haemodynamic response to laryngoscopy, endotracheal intubation & intraocular pressure changes following suxamethonium administration in patients undergoing elective non-ophthalmic operations under general anaesthesia

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ABSTRACT

BACKGROUND: Patients with penetrating eye injury often present with full stomach. These patients require rapid sequence induction (RSI) without increasing intraocular pressure (IOP). Succinylcholine, most common drug for RSI increases IOP. Laryngoscopy & intubation further aggravates this rise in IOP besides causing a haemodynamic pressor response manifesting as tachycardia & hypertension.

AIMS: To study effect of dexmedetomidine premedication in attenuating haemodynamic pressor response to intubation & rise in IOP associated with suxamethonium administration, laryngoscopy & endotracheal intubation.

METHODS: 100 ASA I/II patients undergoing general anaesthesia for elective non-ophthalmic surgery included in this double blind, randomized, prospective study were allocated into two groups of fifty each to receive 0.4 μg/kg Dexmedetomidine or normal saline i.v over 10 mins, 10 mins before induction. IOP, HR & MAP were recorded at baseline, 1 min after suxamethonium & 1, 2, 3 & 5 mins after endotracheal intubation.

RESULTS: Dexmedetomidine administration resulted in decrease in HR, MAP & IOP from baseline values. Suxamethonium caused increase in IOP in control group. In study group IOP never increased above baseline. Also, increase in HR & MAP in the study group was less than that seen in the control group.

CONCLUSION: Dexmedetomidine 0.4 μg/kg body weight given i.v as premedication prevents the rise in IOP associated with suxamethonium administration, laryngoscopy & endotracheal intubation & also attenuates haemodynamic pressor response to laryngoscopy and endotracheal intubation.