

Comparison of Dexmedetomidine with Fentanyl for Prevention of Etomidate Induced Myoclonus

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ABSTRACT

Background & Aims: Etomidate has a stable cardiac profile as an induction agent. But, reported incidence of etomidate induced myoclonus is 50% to 80%. This study was conducted to compare the effect of dexmedetomidine with fentanyl for reduction of etomidate induced myoclonus. **Materials and Method:** This study was conducted in 60 ASA grade I,II,III patients in the age group of 18-55 years undergoing elective surgeries under general anaesthesia. Patients were randomized and divided into 2 groups of 30 patients each. Group 1 received Inj. dexmedetomidine 0.5 mcg /kg iv and Group 2 received Inj. fentanyl 1 mcg /kg iv as a premedication slowly over 5 mins. After that, they were administered Inj. etomidate 0.3 mg/kg and were observed for myoclonus for 2 minutes. Severity of etomidate induced myoclonus was assessed using four point intensity scoring. Safety of study drugs was compared using mean HR, mean BP and adverse events observed. **Results:** Myoclonus was observed in 36.67% patients after inj. dexmedetomidine 0.5 mcg /kg and in 50% patients after inj. fentanyl 1 mcg /kg (P value = 0.046). Incidence of myoclonus with grade 1,2 and 3 was 26.66%, 10% and 0% respectively in group 1 and 33.33%, 13.33% and 3.33% in group 2 respectively. **Conclusion:** Incidence of etomidate induced myoclonus was significantly decreased in patients pre-treated with dexmedetomidine in comparison with fentanyl. In terms of severity grading, difference between these two drugs was insignificant.

Keywords: Myoclonus, Etomidate, Dexmedetomidine, Fentanyl.