

COMPARATIVE STUDY BETWEEN INTRAVENOUS 50% MAGNESIUM SULPHATE AND DEXMEDETOMIDINE FOR ATTENUATION OF CARDIOVASCULAR STRESS RESPONSE DURING LARYNGOSCOPY AND ENDOTRACHEAL INTUBATION

ABSTRACT:

BACKGROUND:

Direct laryngoscopy and endotracheal intubation frequently induces a cardiovascular stress response due to reflex sympathetic stimulation. This response may be hazardous in patients with hypertension, coronary artery disease, myocardial disease, cerebrovascular disease. Numerous agents have therefore been utilized to blunt this response.

OBJECTIVES:

The present study was undertaken to compare effectiveness of intravenous Magnesium sulphate and Dexmedetomidine in suppressing the cardiovascular stress response.

METHODS:

60 Patients were divided in to two groups of 30 patients each. Group-M received 30mg/kg of Magnesium sulphate and Group-D received 1 mcg/kg Dexmedetomidine ten minutes before intubation. Both the groups were observed for changes in hemodynamic parameters i.e. heart rate (HR) systolic and diastolic blood pressure ,mean rterial blood pressure at 0, 1, 3, 5, 10 minutes post intubation and level of sedation during recovery using ramsay sedation score scale and for adverse effects.

RESULTS:

Comparison of parameters was done using One-Way ANOVA and categorical data was compared by using Chi-square test. p Value <0.05 was considered as statistically significant. It was observed that both magnesium sulphate and dexmedetomidine attenuated the rise in systolic , diastolic blood pressure and mean arterial blood pressure, but magnesium failed to attenuate increase in the heart rate which is less than 10 beats/ min. Sedation score was statistically significant in dexmedetomidine group compared to magnesium group.

CONCLUSION:

Intravenously administered Magnesium sulfate 30mg/kg given before intubation is equally effective as Dexmedetomidine 1 mcg/kg for attenuation of the cardiovascular stress responses to laryngoscopy and endotracheal intubation

KEYWORDS:

Stress response, magnesium sulphate, dexmedetomidine, systolic blood pressure, Diastolic blood pressure, mean arterial blood pressure, heart rate, ramsay sedation score scale and laryngoscopy.