A COMPARATIVE STUDY ABOUT THE EFFECT OF DEXMЕDЕTOMIDINE VERSUS LIGNOCAINE ON HEMODYNAMIC AND RECOVERY RESPONSES DURING TRACHEAL EXTUBATION

ABSTRACT

OBJECTIVES: Extubation of the trachea is associated with wide fluctuations in the hemodynamics and reflex increases in airway reactivity leading to stress responses and airway irritation. This study was undertaken to analyze the effects of dexmedetomidine versus lignocaine on the variations in hemodynamics and recovery responses during tracheal extubation.

MATERIALS & METHODS: 100 patients belonging to ASA I & II, aged between 20 and 45 undergoing laparoscopic abdominal surgeries were allocated into two groups – group D for Dexmedetomidine and group L for Lignocaine with fifty in each group. The patients in Group D received dexmedetomidine infusion of 0.75 μg / kg in 100 ml of 0.9 % sodium chloride over a period of fifteen minutes before the anticipated time of extubation and the patients in group L received preservative free lignocaine 2 % at the dose of 1.5 mg / kg bolus intravenously, two minutes before the time of extubation. Anesthetic techniques were standardized. Heart rate, systolic, diastolic, mean arterial pressures were documented in both the groups during injection. Later at one, three, five, ten and
fifteen minutes after injection in group D and one minute after injection in group L prior to extubation. The same were documented during extubation and at one, three, five minutes following endotracheal extubation and after that every five minutes for up to thirty minutes in both the groups D and L. Quality of extubation was evaluated on a 5 point scale and Emergence – agitation was evaluated on a 6 point scale. Any event of bradycardia, hypotension, vomiting, respiratory depression, laryngospasm or bronchospasm were noted.

RESULTS: Heart rate, systolic, diastolic, mean arterial pressures were significantly lesser in group D ($P < 0.05$) as compared to lignocaine. Extubation quality score of majority of patients was 2 in group D and 3 in group L. Emergence – agitation score of most of the patients was 3 in group D and 2 in group L. 6 patients in group D had bradycardia as compared to 1 patient in the group L. One patient in group D and 3 patients in group L had vomiting. No patient had any other side effects.

CONCLUSION: Dexmedetomidine administered before tracheal extubation, was more effective in maintaining the hemodynamic stability, facilitated smooth tracheal extubation and had a better quality of recovery as compared to lignocaine.

KEY WORDS: Extubation, dexmedetomidine, lignocaine.