Comparing the Effectiveness of Intravenous Diazepam and Methyl Prednisolone in Treatment of Acute Peripheral Vertigo; a Clinical Trial

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Abstract

Introduction: Although vertigo alone is not counted as a disease, it is one of the most common complaints of patients presenting to emergency departments (ED). Considering that in facing peripheral vertigo a single treatment has not been agreed upon, we decided to evaluate the effectiveness and side effects of intravenous (IV) methyl prednisolone and diazepam in treating acute peripheral vertigo in a clinical trial. Methods: This double blind clinical trial was done to compare the effectiveness of IV methyl prednisolone and diazepam in controlling acute peripheral vertigo in patients visiting ED. Patients were allocated to one of the 2 groups using simple randomization, and vertigo severity (based on VAS score), hemodynamic changes, level of consciousness, changes in blood sugar and the side effects were compared between the 2 groups 30, 60, and 120 minutes after injection. Results: The study was done on 113 patients with the mean age of 41.8 ± 10.4 years (20-60) (58.4 male). Patients were divided into 2 groups of IV diazepam (51 patients) and IV methyl prednisolone (62 patients). A significant difference was not found between the 2 groups regarding age (p = 0.83), sex (p = 0.339), vertigo severity (p = 0.337) and vital signs (p = 0.986) on arrival. Vertigo severity only showed significant difference between the groups after 120 minutes of drug administration (p = 0.003). No case of low blood pressure, loss of consciousness, or hemodynamic instability was seen in either group during 120 minutes. Dry mouth was significantly higher in the group receiving IV diazepam (p =0.007). Mean blood sugar for diazepam and methyl prednisolone groups after 60 and 120 minutes were 120.6 ± 36.2 and 143.1 ± 51.2 (p = 0.009) and 119.5 ± 35.1 and 162.9 ± 50.9 (p < 0.001). Conclusion: In conclusion, considering the higher effectiveness and non-significant side effects of IV diazepam, it seems to be better than IV methyl prednisolone for symptom control in patients presenting with acute peripheral vertigo.

Keywords: Diazepam; prednisolone; vertigo; emergency service; hospital; clinical trial