

Original article

Comparing the Effects of Dexmedetomidine and Midazolam on Sedation in Children with Head Trauma to Perform CT in Emergency Department

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SUMMARY

Many of the children referred to the emergency complain of head trauma. Children usually require sedation to reduce their failure and fear because of high activity and fear of performing computed tomography (CT). Dexmedetomidine and Midazolam belong to short-acting drugs for this purpose. This study aimed to compare the effect of the above mentioned drugs on sedation in children.

Children referred to the emergency department were randomly divided into two groups. Group A was sedated with 0.05 mg/kg IV Midazolam and group B with 2µg/kg IV Dexmedetomidine over 10 minutes (loading dose), and then repeat boluses 2µg/kg IV over 10 minutes. Measurements included induction time, recovery time, efficacy, side effects, complications, and failure with each drug and vital signs and RAMSY scale. SPSS V.20 was used for data analysis. $p < 0.05$ was considered statistically significant.

Totally, 100 patients participated in the current study (44 girls and 56 boys). The mean and standard deviation of age was 5.3 ± 2.5 years. During the study, just 5 patients (10%) from group A did not have appropriate sedation following the injection of first dose of Midazolam and received the second dose. However, in B group patients no such case was reported. No significant difference was observed among blood pressure, heart rate, respiration and RAMSY Scale among the groups.

No significant difference was seen between efficacy of Midazolam and Dexmedetomidine in pediatric sedation. More research should be done for generalization of our findings .

Key words: computed tomography, dexmetazone, emergency medicine

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