Effectiveness of oral ketamine, Midazolam and Atropine cocktail versus oral Diphenhydramine for pediatric Sedation in Emergency Department

Eftekhari Milani F, MD, Soleimanpour H, MD, Mahmoodpour A, MD.

Emergency medicine Department, Imam Reza Hospital, Faculty of Medicine, Tabriz University of Medical Sciences

Introduction: Sedation is defined as the decrease of consciousness to reduce irritability agitation and anxiety. Sedation is especially important in children for different procedures. In this study we aim to compare the sedation effect of oral ketamine, Midazolam and Atropine cocktail versus oral Diphenhydramine for children in emergency department.

Methods: In this randomized clinical trial, ٨٠ children in need of laceration repair with stitches in emergency ward were randomly assigned to receive oral diphenhydramine (group I) or oral ketamine, midazolam and atropine cocktail for sedation. Findings before and during intervention and behavioral changes two weeks after intervention were evaluated.

Results: There were no significant differences between groups in drug acceptance and degree of anxiety during the procedure. Group II had significantly better sedation during ٤٥ minutes evaluation ($p<٠.٠٥$) and patients reached sooner to higher sedation state ($p=٠٠١$). In group II, cases without movement or with controlled movement during injection ($p=٠.٠٣$) and during procedure ($p=٠.٠٠٥$) was higher and Houpt total score was better ($p=٠.٠٠٩$). Among behavior changes, only poor appetite was significantly higher in group I ($p=٠.٠٢$). Overall behavior change was calculated and observed that these occurred less in group II ($p=٠.٠٤$).

Conclusion: Oral ketamine, midazolam and atropine cocktail had acceptable sedation in children in need of therapeutic procedures in emergency room and due to low behavior changes, it could be recommended for sedation for procedures in emergency room.

Keywords: Diphenhydramine; Midazolam; Ketamine; Sedation; Children; Emergency Service