

Oral Sedation Dosages Effect on Pediatric Patients' Behavior

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Purpose

To research any correlation between medication dosages and the outcome of sedation visits previously conducted on patients at VCU Pediatric Dentistry Clinic using the Diazepam, Meperidine, and Hydroxyzine regimen. Additionally to study patient behavior during work-up visit and its relation to behavior during the sedation using the Frankl Behavior Rating Score.

Methods

A retrospective chart review conducted of VCU Pediatric Dentistry patients who underwent oral moderate conscious sedation to correlate previous patient behavior with outcome of oral moderate sedation using triple regimen (Diazepam, Meperidine, Hydroxyzine).

	Mean	SD	Range
Diazepam	0.28	0.05	0.12, 0.55
Meperidine	1.88	0.44	0.63, 2.92
Hydroxyzine	1.52	0.49	0.51, 3.15

Table: Average Sedation Triple Dose Values

Conclusion

The preliminary results agree with published literature. These results further emphasize on the importance of patient selection in regards to oral sedation in pediatric dentistry.

Results

Preliminary analysis of data from 198 patient sedations with an average age of 7 years and 51% Female. The average dose of the triple combination for meperidine, diazepam and hydroxyzine was 1.9mg/kg, 0.28mg/kg and 1.4mg/kg, respectively. Dosage values for the medications in the triple combination were not significantly associated with the sedation visit Frankl scores.

The sedation was considered successful for 91% of cases. Successful treatment was mostly associated with age ($p=0.0139$), hydroxyzine dose ($p=0.0160$), and Frankl score at the consult appointment ($p=0.0043$). A 1-year increase in age was associated with a decreased odds of failure of 0.67 times. A 0.1mg/kg increase in the hydroxyzine dosage was associated with a decrease in the odds of failure of 0.8 times. Additionally, patients with a Frankl score of 1 or 2 at the consult visit were 5.4 times as likely to have a failed sedation.