

MEDLINE Abstract

Comparing the safety, efficacy and recovery of intranasal midazolam vs. oral chloral hydrate and promethazine.

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PURPOSE: The purpose of this study was to compare the safety, efficacy and recovery time of intranasal midazolam spray administered using an atomizer to orally administered chloral hydrate and promethazine for the sedation of pediatric dental patients. **METHODS:** A randomized double-blind crossover study design was utilized in which 31 patients (mean age 41.8 months, range 26-58 months) underwent two restorative dental appointments. At one appointment, subjects received 0.2 mg/kg intranasal midazolam; at the other appointment subjects received 62.5 mg/kg chloral hydrate with 12.5 mg promethazine. Administered at each appointment was 25%-50% N(2)O(2). Physiologic parameters (heart rate, blood pressure, respiratory rate, oxygen saturation) and behavior assessments (crying, movement, sleep) using the Houpt Sedation Rating Scale were recorded at baseline and every five minutes during treatment. Overall behavior was assessed at baseline and at the end of treatment. Following treatment, a modified Vancouver Recovery Scale was used to determine the length of time it took each subject to meet established discharge criteria. **RESULTS:** There were no clinically significant differences in physiologic parameters, however a statistically significant decrease in systolic and diastolic blood pressure was observed in patients sedated with chloral hydrate/promethazine. There were no significant differences in behavior between groups. Patients sedated with intranasal midazolam slept less and recovered quicker than patients sedated with oral chloral hydrate/promethazine. **CONCLUSIONS:** Intranasal midazolam administered using an atomizer is as safe (as assessed by physiologic parameters) and effective (as assessed by behavior ratings) as oral chloral hydrate/promethazine for conscious sedation of pediatric dental patients.

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