The aim of this study was to compare both the behavioral and physiological effects of 2 drug regimens in children: chloral hydrate (CH), meperidine (M), and hydroxyzine (H) (regimen A) versus midazolam (MZ), M, and H (regimen B). Patients between 24 and 54 months of age were examined by crossover study design. Behavior was analyzed objectively by the North Carolina Behavior Rating System and subjectively through an operator and monitor success scale. Physiological data were recorded every 5 minutes and at critical points throughout the appointment. Sixteen patients completed this study. No significant differences in behavior were noted by the North Carolina Behavior Rating System or the operator and monitor success scale. A quiet or annoyed behavior was observed 93% and 90% of the time for regimen A and regimen B, respectively. Using the operator and monitor success scale, 63% of regimen A and 56% of regimen B sedations were successful. No statistically significant differences were noted in any of the physiological parameters between the 2 regimens. Ten episodes of hemoglobin desaturation were detected with regimen A sedations. There were no differences between the sedative drug regimens CH/M/H and MZ/M/H for behavioral outcomes or physiological parameters.

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