



SAFETY AND EFFICACY OF BUCCAL MIDAZOLAM COMPARED TO RECTAL DIAZEPAM FOR THE ACUTE TREATMENT OF SEIZURES IN CHILDREN: A SYSTEMATIC REVIEW AND META-ANALYSIS

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BACKGROUND

Prolonged seizures may pose significant morbidity and mortality, thus the need for immediate management with anti-epileptics. Intravenous lorazepam has been shown to be more effective than diazepam and midazolam however, intravenous access may not be easily established and lorazepam is not available locally.

OBJECTIVES

To compare the safety and efficacy of buccal midazolam as opposed to rectal diazepam in the treatment of acute seizures in children less than 18 years old.

METHODS

This is a systematic review and meta-analysis of randomized controlled trials comparing the use of buccal midazolam and rectal diazepam as treatment for acute seizures in children less than 18 years old. Reporting was accomplished in compliance with the Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) Guidelines.

RESULTS

There is no significant difference in the mean duration of seizure in minutes and seizure cessation in ten minutes between the buccal midazolam and rectal diazepam groups (Mean difference 0.39; 95% Confidence interval [CI] -0.18 to 0.96; $p=0.17$; Risk ratio [RR] 0.99; 95% CI 0.83 to 1.19, $p=0.2$). There is no significant difference in the risk of respiratory depression between buccal midazolam and rectal diazepam (RR 0.96; 95% CI 0.22 to 4.13; $p=0.61$).

CONCLUSION

The administration of buccal midazolam and rectal diazepam are similar in efficacy and safety in terms of time to seizure cessation, termination of seizure within ten minutes, and risk of respiratory depression.