

Rectal Diazepam vs. Intranasal Midazolam for Acute Management of Prolonged Seizures Without Intravenous Access: A Synthesis of the Evidence Based Research
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Problem: The National Institute of Neurological Disorders and Stroke estimate that more than two million people in the United States, 1 in 10 will have an unprovoked seizure and 1 in 100 will be diagnosed with epilepsy.

Evidence: Status epilepticus is a potentially life-threatening condition in which a person has an abnormally prolonged seizure. Seizures greater than five minutes require treatment. About 195,000 people each year in the United States have prolonged seizures. Prolonged seizures need to be addressed quickly with appropriate medication management that is quick and easy to administer by medical and non-medical personnel.

Strategy: A literature search was conducted to locate evidence regarding medication management of prolonged seizure with the use of rectal diazepam and/or intranasal midazolam as rescue medications administered to pediatrics and adults who had prolonged seizures greater than five minutes. Analysis was conducted on randomized control trials, evidence summaries, reports of medical treatment, comparative studies, and safety and efficacy studies conducted between 2000 and 2008.

Practice Change: The evidence supports intranasal midazolam as a rescue medication. The advantages are: a) rapid and direct absorption into the systemic circulation; b) non-invasive administration; c) decreased risk of adverse side effects due to short half life of 0.8 hours; d) faster cessation of seizures in 1-5 minutes compared to rectal diazepam 2-10 minutes. Research proves that intranasal midazolam is a safe and effective rescue medication for prolonged seizures.

Evaluation: Rectal diazepam remains the current treatment of choice and has some significant drawbacks. Intranasal midazolam has been proven to be safe and effective for pre-hospital and hospital treatment of prolonged seizures with minimal adverse effects.

Recommendations: Practitioners managing patients with seizures and epilepsy should review and revise their practice according to a patient's specific needs in regards to rescue medication management for seizures. This needs to be a family centered approach involving all aspects of the patient's care as well as the safety and efficacy of both treatment options.

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