

INTRANASAL (IN) MIDAZOLAM

Indications:

- Initial agent for termination of seizure when IV access is not available
- Procedural sedation where sole agent used is IN Midazolam (i.e. no other indication for IV access)

Dose:

0.2mg/kg/dose (0.04mL/kg of 5mg/mL concentrated solution)

- Dose can be repeated after 5 minutes, PRN x 2 doses total for seizure termination, and PRN to desired level of sedation for procedural sedation indication
- If inadequate effect after 2nd dose for seizure termination, consider other agents

Onset: Within 5 minutes of intranasal administration

Peak Effect: Within 10 minutes of intranasal administration

Duration: 30-60 minutes following intranasal administration

Contraindications:

- Allergy/Sensitivity to Midazolam or other benzodiazepines
- Occluded nasal passages
- Epistaxis
- Intubated patients
- Failure to terminate seizure with 2 previous doses of any benzodiazepines at appropriate doses (consider another class of anticonvulsant)

Precautions:

- Concurrent use of other CNS depressing medications
- Concurrent use of other respiratory depressive medications
- Concurrent use of other intranasal medications (i.e. nasal decongestants, nasal steroids)
- Upper respiratory tract infection with nasal discharge

Administration:

- Draw up calculated dose plus an additional 0.2mL to prime device.
- Attach atomiser (MAD device, WolfeTory).
- Prime atomiser by slowly expelling the additional 0.2mL, leaving the calculated dose in the syringe.
- Position the patient sitting or at a minimum 45° angle.
- Insert atomiser gently into nostril and aim for centre of nostril when squirting in the dose.
- Depress syringe plunger quickly.
- If the dose is greater than 1mL (5mg) split the dose between the two nostrils.



Monitoring:

- Termination of seizure activity
- Heart rate, respiratory rate, blood pressure, oxygen saturations, level of sedation
- Baseline
- At time of administration
- At 5 minute intervals for 15 minutes, then q15minutes until stable for discharge or transfer as determined by the physician

Side Effects:

- Respiratory depression, oxygen desaturation
- Hypotension
- Dizziness
- Nausea and vomiting
- Altered conscious state/ excessive sedation
- Dyspnea/cough
- Hiccoughs
- Stinging in the nose
- Bitter taste in the mouth

Management of Overdose:

- Airway support
- Oxygen
- Ventilatory support

Reversal Agent: (requires IV access). Not recommended for routine use.

- Flumazenil 0.01mg/kg IV over 15 seconds. May repeat q1-3minutes PRN for reversal of excessive sedation. Maximum 5 doses, maximum 0.2mg/dose
 - **CAUTION** – Flumazenil reverses sedation, but not respiratory depression associated with benzodiazepines. Airway supportive care necessary. Use of Flumazenil may provoke seizure if Midazolam was used for seizure termination.