

Carer-Administered Buccal/Intranasal Midazolam MDZ for Convulsions

1. INTRODUCTION

- Midazolam is a benzodiazepine drug, which is now being administered by carers to treat convulsions as an alternative to rectal diazepam.

2. PRESENTATION



- Midazolam is presented in a glass bottle containing 5ml of Midazolam, 10 milligrams per ml and supplied with four 1ml syringes to draw up the dose (**Figure 1**).

Figure 1¹ – Midazolam presentation and method of drawing up dose

3. INDICATIONS

Grand-mal convulsion continuing

- In the event of a grand-mal convulsion still continuing ten minutes after the first dose of Midazolam:
 - a. the ambulance clinician can advise the carer to administer a second dose of Midazolam

OR

- b. ambulance paramedics and technicians can administer the patient's own prescribed Midazolam – if they are competent to administer medication via the buccal or intranasal route and are familiar with the indications, actions and side effects of Midazolam

OR

- c. a paramedic can administer a single dose of Diazepam intravenously (IV) or rectally (PR).

N.B. Due to the time taken to cannulate and administer intravenous Diazepam and the time it takes for rectal diazepam to act, a second dose of Midazolam is preferable. If a grand-mal convulsion continues ten minutes after the second dose, on-line clinical advice should be sought

¹Figures 1, 2 and 3 are reproduced with the kind permission of Special Products Ltd.

4. ACTIONS

- Midazolam has a sedative action similar to that of diazepam but of shorter duration. The onset of action usually occurs within five minutes, but is dependant on the route of administration. In 80% of episodes convulsions have stopped after ten minutes.

5. ADMINISTRATION AND DOSAGE

- **Dosage** – individual tailored dose as per the patient's care plan.
- **Administration** - Midazolam is administered by carers using either the buccal or intranasal routes. The required dose is drawn up and half the dose is administered quickly to each side of the lower buccal cavity (between the cheek and gum) (**Figure 2**) or into each nostril (**Figure 3**).

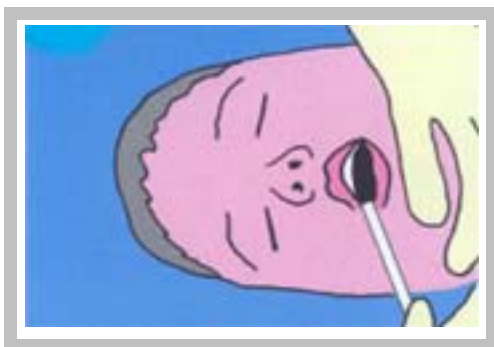


Figure 2¹ - Buccal administration

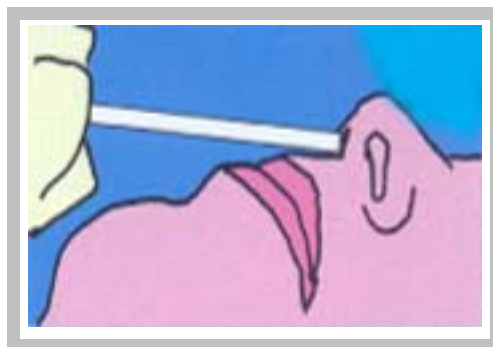


Figure 3¹ – Intranasal administration

N.B. A third dose cannot be administered until six hours after the second dose.

6. SIDE EFFECTS

- The side effects of buccal Midazolam are similar in effect to IV administration, although the timings may differ:
 - respiratory depression
 - hypotension
 - drowsiness
 - muscle weakness
 - slurred speech
 - occasionally, agitation, restlessness and disorientation may occur.

7. ADDITIONAL INFORMATION

- Some patients may have a Patient Specific Direction (PSD) drawn up by their specialist, customised to the specific nature of their convulsions. This is especially true of patients with learning disabilities living in residential care homes. Whenever possible check with the carers for the existence of a PSD for the patient, as this will normally give further guidance on treatment and when the patient should be further assessed.

N.B. – At the current time, the Misuse of Drugs Act does not permit paramedics to be in possession of Midazolam, so the above guidance only applies when the patient is in possession of their own supply of Midazolam. **23rd February 2009**