1. Overview

Purpose
This protocol outlines the administration, prescribing and monitoring of clonazepam at Waitemata District Health Board.

Scope
All medical and nursing staff

⚠️ This guideline is for use in Palliative Care ONLY.

2. Presentation

Clonazepam 0.5mg and 2mg tablets
Clonazepam (Rivotril®) oral drops 2.5mg/ml (1 drop = 0.1mg of active ingredient)
Clonazepam 1mg/ml ampoules

3. Indications

Licensed:
• Seizures and myoclonus

Unlicensed:
• Anxiety, panic disorder, restless leg syndrome, neuropathic pain, terminal agitation

Unlicensed route of administration:
• Subcutaneous
4. Mechanism of Action

Clonazepam is a benzodiazepine. It has anti-convulsive, sedative, muscle relaxing and anxiolytic effects. These effects are thought to be mediated mainly by post-synaptic GABA mediated inhibition.¹

5. Dose

The conversion ratio for oral (PO) to subcutaneous (SC) clonazepam is 1:1 and therefore the doses are the same for both routes.

**Note:** Maximum daily doses should not exceed 2-3mg unless advised by the Palliative Care Team. PRN doses may be used more frequently under the advice of the Palliative Care Team.²

<table>
<thead>
<tr>
<th>Indication¹³</th>
<th>Route</th>
<th>Stat and Starting PRN doses</th>
<th>Recommended Max dose</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seizures</td>
<td>PO/Subcut</td>
<td>0.5 – 1mg</td>
<td>4mg</td>
<td>1 – 8mg daily in divided doses</td>
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<td></td>
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<tr>
<td>Panic disorder</td>
<td>PO</td>
<td>0.25mg (tablets) or 0.3mg (3drops) q12hr</td>
<td>2mg</td>
<td>0.5 – 4mg nocte</td>
</tr>
<tr>
<td>Restless legs</td>
<td>PO</td>
<td>0.25mg (tablets) or 0.3mg (3drops) q12hr</td>
<td>2mg</td>
<td>0.5 – 2mg nocte</td>
</tr>
<tr>
<td>Neuropathic pain</td>
<td>PO</td>
<td>0.25 – 0.5mg (tablets) or 0.3 – 0.5mg (3 to 5 drops) q12hr</td>
<td>2mg</td>
<td>0.5 – 8mg daily in divided doses</td>
</tr>
<tr>
<td>Terminal restlessness</td>
<td>Subcut</td>
<td>0.5mg q2hr</td>
<td>3mg</td>
<td>2 – 8mg over 24 hours</td>
</tr>
<tr>
<td></td>
<td>Syringe driver (CSCI)</td>
<td>1mg</td>
<td>3mg</td>
<td>2 – 8mg over 24 hours</td>
</tr>
</tbody>
</table>

**Note:** Clonazepam is long acting and can be given once daily as a bolus injection, preferably at night (because of sedative effect)²

6. Administration

6.1 Diluent

- For subcutaneous bolus administration dilute each 1mg/ml ampoule with 1ml water for injection.² ⁴
- When added to a syringe driver the recommended diluent is water for injection.² ⁴

6.2 Additional equipment

- Subcutaneous Saf-T-Intima single lumen [ADM140]. (refer WDHB Policy Palliative Care- Subcutaneous Site Selection, Insertion and Monitoring of BD Saf-T-Intima Cannula)
Clonazepam – Palliative Care (Adults)

- If giving via syringe driver:
  - Continuous subcutaneous infusion pump (Niki T34)
  - Low-sorbing or non-PVC extension set (up to 50% of infused clonazepam is adsorbed onto PVC tubing)

6.3 Compatibility

Compatible with:
Water for injection, 0.9% sodium chloride, methadone, dexamethasone, morphine sulfate, morphine tartrate, oxycodone, haloperidol, hyoscine hydrobromide, hyoscine butylbromide, metoclopramide, octreotide, glycopyrronium, levomepromazine, ketamine.2, 4, 5

Concentration dependent compatibility with:
Cyclizine2, 4

⚠️ Do not use if the solution is cloudy or a precipitate is present.

6.4 Administration Procedure

- Should be injected through a Saf-T-Intima single lumen (butterfly) [ADM140] or directly via subcutaneous needle.
- The Saf-T-Intima should be flushed with 0.2ml of water for injection after administration of medication.
- Can be administered via a continuous subcutaneous pump (Niki T34).

7. Observation and Monitoring

Monitor for excessive drowsiness

8. Contraindications and Precautions

Contraindications
- Hypersensitivity to clonazepam or other benzodiazepines
- Severe respiratory insufficiency
- Severe hepatic insufficiency1

Precautions
- Respiratory disease
- Hepatic impairment
- Sleep apnoea syndrome
- Myasthenia gravis
- Avoid sudden withdrawal1, 2

9. Possible Adverse Effects

- Drowsiness
- Fatigue/lassitude

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This information is correct at date of issue. Always check on Waitemata DHB Controlled Documents site that this is the most recent version.
Clonazepam – Palliative Care (Adults)

- Muscle weakness
- Dizziness
- Ataxia / Unsteadiness
- Confusional state
- Paradoxical reactions (irritability, aggression, agitation, nightmares)
- Respiratory depression
- Slowed reactions

Adverse effects can be minimised by starting with low doses at bedtime

10. Drug Interactions

- Concurrent use of clonazepam and other centrally acting medications may result in potentiation of their effects e.g. anti-convulsants, hypnotics, opiates, alcohol
- Phenytoin, carbamazepine and sodium valproate may increase the clearance of clonazepam

11. References

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<th>Reference</th>
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</table>
| 1 | Medsafe Website - Clonazepam Datasheets  
| 3 | New Zealand Formulary online, release 46-1 April 2016 – Clonazepam monograph.  