Drug Therapy Protocols: Furosemide (frusemide)

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Date
April, 2018

Purpose
To ensure a consistent procedural approach to Furosemide (frusemide) administration.

Scope
Applies to all QAS clinical staff.

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Review date
April, 2021

Information security
This document has been security classified using the Queensland Government Information Security Classification Framework (QGISCF) as UNCLASSIFIED and will be managed according to the requirements of the QGISF.

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**Furosemide (frusemide)**

**Drug class**
Loop diuretic

**Pharmacology**
Furosemide (frusemide) is a potent loop diuretic that acts by inhibiting sodium and chloride absorption in the ascending Loop of Henle (proximal and distal tubules).[1–3]

**Metabolism**
The majority of parenteral frusemide is excreted in the urine within 24 hours, the remainder is excreted in the faeces.[4]

**Indications**
- Congestive cardiac failure
- Fluid overload (with compromised renal function)
- Oliguria (after correction of hypotension and hypovolaemia)

**Contraindications**
- Allergy and/or Adverse Drug Reaction
- Pre-hospital use in acute cardiogenic pulmonary oedema
- Patients < 12 years of age

**Presentation**
- Ampoule, 20 mg/2 mL frusemide

**Precautions**
- Hypotension

**Side effects**
- Marked diuresis can lead to hypotension
- Potassium loss associated with diuresis may aggravate or potentiate dysrhythmias

**Onset (IV)**
- 3–5 minutes (peak 30 minutes)

**Duration (IV)**
- ≈ 2 hours (following stat IV dose)

**Half-life**
- 1.5 hours
**Furosemide (frusemide)**

**Schedule**

- S4 (Restricted drugs).

**Routes of administration**

- Intravenous infusion (IV INF)

**Special notes**

- Increased infusion doses may be required in patients with chronic renal impairment and/or who take regular high dose oral furosemide (frusemide).
- All cannulae and IV lines must be flushed thoroughly with sodium chloride 0.9% following each medication administration.

**Paediatric dosages**

**Note:** QAS officers are **NOT** authorised to administer furosemide (frusemide) to paediatric patients.

**Adult dosages**

- **Congestive cardiac failure**
- **Fluid overload** (with compromised renal function)
- **Oliguria** (after correction of hypotension and hypovolaemia)

**Routes of administration**

- Congestive cardiac failure
- Fluid overload (with compromised renal function)
- Oliguria (after correction of hypotension and hypovolaemia)

**Syringe preparation:** Mix 100 mg (10 mL) of furosemide (frusemide) with 40 mL of sodium chloride 0.9% in a 50 mL syringe to achieve a final concentration of 2 mg/mL. Ensure all syringes are appropriately labelled. Administer via syringe driver.

**CCP ESOP aeromedical – RSQ Clinical Coordinator consultation and approval required in all situations.**

Continue furosemide (frusemide) infusions already commenced at hospital, using the same concentration and administration rate already established. This may involve withdrawing previously mixed and labelled solutions from the referring hospital. Should the RSQ Clinical Coordinator request a furosemide (frusemide) infusion be commenced, the following procedure is to be undertaken.

Commence infusion at **5 mg/hour** (2.5 mL/hour) and increase by **5 mg/hour** (2.5 mL/hour) every 60 minutes to a maximum dose of **20 mg/hour** (10 mL/hour) until the desired urine output is achieved.

**Syringe preparation:** Mix 100 mg (10 mL) of furosemide (frusemide) with 40 mL of sodium chloride 0.9% in a 50 mL syringe to achieve a final concentration of 2 mg/mL. Ensure all syringes are appropriately labelled. Administer via syringe driver.