

- **MEDICINAL FORMS** There can be variation in the licensing of different medicines containing the same drug.

Liquid

- ▶ **Curosurf** (Chiesi Ltd)
Poractant alfa 80 mg per 1 ml Curosurf 240mg/3ml endotracheopulmonary suspension vials | 1 vial [PoM] £547.40 (Hospital only)
Curosurf 120mg/1.5ml endotracheopulmonary suspension vials | 1 vial [PoM] £281.64 (Hospital only)

5.1 Neonatal apnoea

XANTHINES

Caffeine citrate

09-May-2019

● **INDICATIONS AND DOSE****Neonatal apnoea (specialist supervision in hospital)**

- ▶ BY MOUTH, OR BY INTRAVENOUS INFUSION

- ▶ **Neonate:** Loading dose 20 mg/kg, then maintenance 5 mg/kg once daily, started 24 hours after the loading dose; increased if necessary up to 20 mg/kg daily, a maintenance dose above 20 mg/kg daily can be considered if therapeutic efficacy is not achieved—the plasma-caffeine concentration should be monitored to ensure that a safe level is maintained.

DOSE EQUIVALENCE AND CONVERSION

- ▶ Caffeine citrate 2 mg \equiv caffeine base 1 mg

PHARMACOKINETICS

- ▶ Caffeine citrate is well absorbed when given orally.

- **UNLICENSED USE** [EvGr] Higher maintenance doses differ from product literature and adhere to national guidelines

**IMPORTANT SAFETY INFORMATION****MHRA/CHM ADVICE: SAFE PRACTICE**

From August 2013, all licensed preparations of caffeine are required to be labelled as caffeine citrate. To minimise the risk of dosing errors, **always state dose in terms of caffeine citrate when prescribing caffeine.**

Some stock packaged as caffeine base.

- **CAUTIONS** Cardiovascular disease · gastro-oesophageal reflux · rhythm disorder · seizure disorders
- **INTERACTIONS** → Appendix 1: caffeine citrate
- **SIDE-EFFECTS**
 - ▶ **Common or very common** Arrhythmias · hyperglycaemia
 - ▶ **Uncommon** Seizure
 - ▶ **Frequency not known** Brain injury · deafness · failure to thrive · feeding intolerance · feeling jittery · gastrointestinal disorders · hypoglycaemia · increased cardiac output · irritability · regurgitation · restlessness
- **HEPATIC IMPAIRMENT** Manufacturer advises caution (risk of increased frequency of side-effects).
Dose adjustments Manufacturer advises consider dose adjustment according to plasma-caffeine concentration.
- **RENAL IMPAIRMENT** Manufacturer advises caution with impaired renal function—potential for accumulation of caffeine.
Dose adjustments Reduced daily maintenance dose required—consult product literature.
- **MONITORING REQUIREMENTS**
 - ▶ [EvGr] The therapeutic range for plasma-caffeine concentration is usually 10–20 mg/litre (50–100 micromol/litre), but a concentration of 25–35 mg/litre (130–180 micromol/litre) may be required. Signs of toxicity only normally occur at concentrations greater than 50 mg/litre (260 micromol/litre). ⚠

- ▶ Monitor for recurrence of apnoea for 1 week after stopping treatment.

- **DIRECTIONS FOR ADMINISTRATION** Caffeine citrate injection may be administered *by mouth or by intravenous infusion*. For *intravenous infusion*, manufacturer advises give loading dose over 30 minutes and maintenance doses over 10 minutes.

● **NATIONAL FUNDING/ACCESS DECISIONS****Scottish Medicines Consortium (SMC) decisions**

SMC No. 814/12

The *Scottish Medicines Consortium* has advised (September 2013) that *Peyona*® is accepted for use within NHS Scotland for the treatment of primary apnoea of premature newborns only whilst *Peyona*® is available at the price agreed in the patient access scheme.

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Solution for injection

- ▶ **Caffeine citrate (Non-proprietary)**

Caffeine citrate 10 mg per 1 ml Caffeine citrate 10mg/1ml solution for injection ampoules | 10 ampoule [PoM] £48.82

Solution for infusion

- ▶ **Peyona** (Chiesi Ltd)

Caffeine citrate 20 mg per 1 ml Peyona 20mg/ml solution for infusion ampoules | 10 ampoule [PoM] £172.50 (Hospital only)

Oral solution

- ▶ **Caffeine citrate (Non-proprietary)**

Caffeine citrate 10 mg per 1 ml Caffeine citrate 50mg/5ml oral solution | 5 ml [PoM] £25.99 DT = £25.99