CHLORAL HYDRATE

Trade Name	Chloral Hydrate (Biomed or Orion)
Class	Sedative and hypnotic
Mechanism of Action	CNS depressant with actions similar to barbiturates, producing quiet, deep sleep. Effects confined to cerebral hemispheres.
Indications	Sedation for procedures Sedation to tolerate long term CPAP/BiPAP
Contraindications	Moderate to severe renal impairment, liver disease, cardiac disease, evidence of GI compromise or gastritis. Caution in patients with respiratory distress who are not on CPAP or ventilated. Oral administration no recommended in patients with oesophagitis, gastristis o gastric or duodenal ulcers.[3] Use regularly for less than two weeks to avoid tolerance and dependence. Doses of IV frusemide given while a patient is receiving chloral hydrate have resulted in flushing, sweating, and BP changes.
Supplied as	1g in 10mL oral mixture (100mg per mL) supplied as either a 50mL or 200mL bottle
Dilution	See administration (dilute 1 to 3 with water if not given with a feed due to the high osmolality)[6]
Dosage	**Single Dose:** For procedures / investigations such as echo, MRI, ABR 50mg/kg/dose and additional increment of 25-50mg/kg/dose if sedation has not been achieved **Maximum single dose not to exceed 250mg (2.5mL*)*** **Repeated Use:** Long-term need for CPAP usually in those post-term 25mg/kg/dose**,** prescribed in the prn section of the drug chart **Maximum recommended dose = 100mg /kg/day[6]**
Interval	4hrly initially (for up to 3 doses), then 6hrly
Administration	Where possible, give with a feed or diluted with water, to minimise GI irritation and disguise the taste. Take care to avoid the baby gasping and aspirating (due to taste).
Compatible With	Do not mix with other medications
Incompatible With	Do not mix with other medications

Interactions	There are no known drug interactions that would prevent concomitant use of chloral hydrate however choral hydrate may increase the effects of other CNS and flumazenil is known to decrease the effects of chloral hydrate.
Monitoring	Assess level of restlessness and sedation; paradoxical excitement can occur if baby in pain. For signs of toxic effects (see Adverse Reactions) Monitor GI function for gastric stasis or irritation. Monitor skin for rash
Stability	Manufacturer's expiry (Discard 3 months after opening)
Storage	Room temperature (in Controlled Drug Safe), Protect from light.
Adverse Reactions	Gastric irritation, jaundice (indirect hyperbilirubinaemia), paradoxical excitement. Toxic effects include CNS, respiratory and myocardial depression, arrhythmias, ileus, bladder atony.
Metabolism	Rapid oral absorption and action within 15-60 minutes. Rapidly metabolised to trichloroethanol (TCE, an active metabolite) and trichloroacetic acid (TCA) in erythrocytes, liver and other tissues. Mainly excreted in urine as conjugate of TCE, with small amounts in bile and faeces. Half-life of TCE up to 66 hours in neonates, mean of 28 hours in term babies. TCA has longer half-life. Risk of accumulation with repeated regular doses.
Comments	May produce false positive urine glucose with Clinitest tablets. Solution contains alcohol and hydroxybenzoate Not currently a registered product in NZ and is imported from Australia ∴ requires recording in Recorded Drugs Register. Patient names are supplied to Drug Company by Pharmacy.
References	1. Parfitt K (Ed), Martindale The Extra Pharmacopoeia, 33rd Edition, 2002, p669-70 2. American Hospital Formulary Service AHFS, 2002 p2415-7 3. Neofax 4. Drugdex, Micromedex CD-ROM database, 2003 5. CDHB Chch Hospital Policy and Procedure Manual Vol A, 6.4 Oral Sedation for Children, 19/11/01 6. Australasian Neonatal medications Formulary
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