CLONIDINE

Read in conjunction with Disclaimer

HIGH RISK Medication

Formulary: Restricted Requires Neonatologist review within 24 hours of initiation	
Presentation	**Ampoule:** 150 microg/mL **Oral suspension:** 1 microg/mL (KEMH only), 10 microg/mL
Drug Class	Centrally acting Alpha$_2$ adreno-receptor agonist
Indication	• Neonatal abstinence syndrome (NAS) • Adjunct analgesia • Adjuvant sedative, anxiolytic (opioid- and benzodiazepine-sparing effect) • Iatrogenic Acquired Withdrawal Syndrome (IWS)
Special Considerations	• Do not discontinue clonidine abruptly, monitor heart rate and blood pressure – discontinue gradually • Rebound hypertension may occur after cessation • Rebound neonatal abstinence syndrome may occur after cessation • May need to reduce dose in infants with renal impairment
Monitoring	• Heart rate and blood pressure every 4 hours the first 2 days of therapy and every 12 hours thereafter • Blood pressure closely for 48 hours after discontinuing clonidine to assess for rebound hypertension • Monitor NAS scores every 3 to 4 hours during treatment using Neonatal Abstinence Scoring
Compatibility	**Fluids:** Sodium Chloride 0.9% Refer to KEMH Neonatal Medication Guideline: Y-Site IV Compatibility in Neonates
Interactions	Combination with beta blockers may enhance bradycardia and hypotension but may rarely cause paradoxical increase in BP; monitor clinical effects and titrate clonidine dose carefully.
Side Effects	**Common:** Increased mucus secretions, oedema, flushing, hypotension, sedation
	Infrequent: Bradycardia, AV block, arrhythmias
Storage & Stability	**Ampoule:** Store at room temperature, below 25^{o}C **Oral suspension:** Refrigerate at 2 to 8^{o}C, do not freeze

ORAL

Presentation (for oral use)	**Oral suspension**: **PCH**: 10 microg/mL **KEMH**: 10 microg/mL, 1 microg/mL – prepared in pharmacy
Dosage	**Neonatal Abstinence Syndrome** *Infants 35 weeks CGA or older:* • 0.5 to 1 microg/kg/dose every 6 hours • Increase dose according to response by increments of 25 to 50% • Maximum of 12 microg/kg/**day**
	Analgesia 0.5 to 2 microg/kg/dose every 6 hours • Higher doses can ONLY be prescribed under specialist advice
	Iatrogenic Acquired Withdrawal Syndrome (IWS) 0.5 to 2 microg/kg/dose every 6 hours • Higher doses can ONLY be prescribed under specialist advice
Preparation	**PCH** – Use suspension available on ward **KEMH** – Use suspension made by pharmacy *If suspension not available – prepare the following solution using clonidine 100 microgram tablet:* • Disperse ONE clonidine tablet (100 microg) in 10 mL of water • Tablet will disperse within 2 minutes • Concentration is 100 microg/10 mL = **10 microg/mL** • Discard any unused solution immediately
Administration	• Shake well before use • Draw prescribed dose into oral/enteral syringe • Can be given Oral/OGT/NGT • May be given anytime in relation to feeds

INTRAVENOUS			
	Presentation (for IV use)	**Ampoule:** 150 microg/mL	
	Dosage	**Analgesia – CONTINUOUS IV Infusion** *Infants 37 weeks CGA or older* 0.5 to 2 microg/kg/hour • Start with 0.5 microg/kg/hour in self-ventilating babies. Adjust with caution based on clinical effect.	
		Analgesia – INTERMITTENT IV Infusion 0.5 to 2 microg/kg/dose every 6 hours • Higher doses can ONLY be prescribed under specialist advice	
		Iatrogenic Acquired Withdrawal Syndrome 0.5 to 2 microg/kg/dose every 6 hours • Higher doses can ONLY be prescribed under specialist advice	
	Preparation	**CONTINUOUS IV Infusion** Dilute 50 microg per kilogram of baby's weight (≈ 0.33 mL/kg) to 50 mL with sodium chloride 0.9%	
		INTERMITTENT IV Infusion Withdraw 1 mL (150 microg) clonidine and make up to 50 mL total volume with sodium chloride 0.9% • *Concentration now equal to **3 microg/mL***	
	Administration	**CONTINUOUS IV Infusion:** Infuse at 0.5 to 2 mL/hour = 0.5 to 2 microg/kg/hour	
		INTERMITTENT IV infusion: • First dose to be administered in the presence of a doctor • Infuse prescribed dose via syringe driver pump over 10 to 15 minutes	

Related Policies, Procedures, and Guidelines

HDWA Mandatory Policies:

MP 0131/20: WA High Risk Medication Policy

Clinical Practice Guidelines:

Neonatology – Neonatal Abstinence Syndrome (NAS)

Neonatology – Narcotic Dependence: Treatment of Iatrogenically Acquired Narcotic Dependence

Neonatology – Post-Operative: Analgesia

WNHS Pharmaceutical and Medicines Management Guidelines:

High Risk Medicines

References

Australian Medicines Handbook. Clonidine. In: Australian Medicines Handbook [Internet]. Adelaide (South Australia): Australian Medicines Handbook; 2023 [cited 2024 Jan 08]. Available from: https://amhonline.amh.net.au/

Australasian Neonatal Medicines Formulary (ANMF). Clonidine. In: Australasian Neonatal Medicines Formulary [Internet]. [Sydney, New South Wales; 2021 [cited 2024 Jan 08]. Available from: www.anmfonline.org

Hunseler C, Balling G, Rohlig C, Blickheuser R, Trieschmann U, Lieser U, et al. Continuous Infusion of Clonidine in Ventilated Newborns and Infants: A randomized Controlled Trial. Pediatric Critical Care Medicine 2014;15 (6): 511- 522.

Society of Hospital Pharmacists of Australia. Clonidine. In: Australian Injectable Drugs Handbook [Internet]. [St Leonards, New South Wales]: Health Communication Network; 2023 [cited 2024 Jan 08]. Available from: http://aidh.hcn.com.au

Takemoto CK, Hodding JH, Kraus DM. Pediatric & neonatal dosage handbook with international trade names index: a universal resource for clinicians treating pediatric and neonatal patients. 27th ed. Hudson (Ohio): Lexicomp; 2020-2021. 693.

Truven Health Analytics. Clonidine. In: NeoFax [Internet]. Greenwood Village (CO): Truven Health Analytics; 2024 [cited 2024 Jan 08]. Available from: https://neofax.micromedexsolutions.com/

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