

## **HYDRALAZINE**

Read in conjunction with Disclaimer

IV - Formulary: Highly Restricted					
Requires Neonatologist approval <b>before</b> commencing.  Oral - Formulary: Restricted					
Requires Neonatologist review within 24 hours of initiation.					
Presentation	Ampoule: 20 mg (powder for reconstitution)				
Classification	Oral solution: 10 mg/mL				
Classification	Antihypertensive, peripheral vasodilator.				
Indication	<ul><li>Moderate to severe hypertension.</li><li>Congestive cardiac failure (afterload reduction).</li></ul>				
Contraindications	Acute porphyrias, cor pulmonale, high output heart failure, severe tachycardia (eg hyperthyroidism).				
Precautions	<ul> <li>Cerebrovascular disease</li> <li>Hypotension</li> <li>Hepatic impairment: Hydralazine undergoes extensive hepatic metabolism, use with caution in hepatic impairment.</li> <li>Renal impairment: Use with caution in patients with significant renal impairment. The manufacturer recommends dose reduction in patients with creatinine clearance less than 30 mL/minute or serum creatinine greater than 221 micromol/L.</li> </ul>				
Monitoring	<ul> <li>Oral: Monitor blood pressure pre- and 30 minutes post-dose; continue until stabilised for 48 hours, then twice daily.</li> <li>IV: Continuous monitoring of blood pressure and heart rate required.</li> <li>Urea and electrolytes at commencement and at any change in therapy.</li> </ul>				
Compatibility	Fluids: Sodium chloride 0.9%, water for injection.				
Incompatibility	Fluids: Glucose solutions.				
Interactions	Use with caution when combining with other antihypertensive agents.				
	<b>Common:</b> Hypotension, flushing, headache, dizziness, fluid retention, diarrhoea, palpitations, reflex tachycardia.				
Side Effects	<b>Infrequent:</b> Angina, nasal congestion, lupus-like syndrome (long-term therapy).				
	Rare: Blood dyscrasia, rash, parasthesia, vasculitis.				
Storage & Stability	<ul> <li>Ampoule: Store below 25°C. Protect from light.</li> <li>Hydralazine may discolour upon contact with metal; discoloured solutions should be discarded.</li> <li>Oral solution: Store below 25°C.</li> </ul>				
Comments	<ul> <li>Use with a beta-blocking agent is often recommended to enhance the antihypertensive effect and decrease the magnitude of reflex tachycardia.</li> <li>Care should be taken in converting between oral and IV dosing (2:1 conversion ratio).</li> </ul>				

	Presentation (for oral use)	Oral Solution: 10 mg/mL		
ORAL	Dosage	Oral: 0.25 to 1 mg/kg/dose every 6 to 8 hours. May be increased to 2 mg/kg/dose every 8 hours if required.		
	Dose Adjustment	Renal and/or hepatic impairment: Dose reduction or increased dosing interval recommended. Manufacturer advises to titrate dose/dosing interval according to the clinical response. See <a href="Precautions">Precautions</a> for more detail.		
	Preparation	<ul> <li>If solution not available after hours – prepare the following solution using 25 mg hydralazine tablets:</li> <li>Disperse one hydralazine tablet (25 mg) in 5 mL of sterile water.</li> <li>Tablet will disperse within 2 minutes.</li> <li>Shake until even dispersion is formed.</li> <li>Concentration is 25 mg/5 mL = 5 mg/mL.</li> <li>Hydralazine degrades quickly, use immediately.</li> <li>Discard any unused solution immediately.</li> </ul>		
	Administration	<ul> <li>Shake well before use.</li> <li>Draw prescribed dose into oral/enteral syringe.</li> <li>Can be given Oral/OGT/NGT.</li> <li>Give with or soon after a feed to enhance absorption.</li> </ul>		

	Presentation (for IV use)	Ampoule: 20 mg (powder for reconstitution)		
	Dosage	Initial dose: 0.1 to 0.5 mg/kg/dose every 6 to 8 hours.	,	
ON		Dose may be gradually increased as required to a maximum of 2 mg/kg/dose every 6 hours.		
NJECT	Dose Adjustment	Renal and/or hepatic impairment: Dose reduction or increased dosing interval recommended. Manufacturer advises to titrate dose/dosing interval according to the clinical response. See <a href="Precautions">Precautions</a> for more detail.		
INTRAVENOUS INJECTION	Preparation	<ul> <li>Ampoule: 20 mg (Powder for reconstitution)</li> <li>Step 1 Reconstitution:</li> <li>Add 1 mL of water for injection to the hydralazine ampoule.</li> <li>Step 2 Dilution:</li> <li>Draw up 20 mg (1 mL) and make up to 20 mL total volume with compatible fluid.</li> <li>Concentration now equal to 1 mg/mL.</li> <li>Note: Discard remaining dilutions immediately after use.</li> <li>IV push:</li> </ul>		
	Administration	IV injection over 5 to 20 minutes.		

Z	Presentation (for IV use)	Ampoule: 20 mg (powder for reconstitution)		
CONTINUOUS INTRAVENOUS INFUSION	Dosage	Continuous IV infusion: 12.5 to 50 microgram/kg/hour		
	Dose Adjustment	Renal and/or hepatic impairment: Dose reduction or increased dosing interval recommended. Manufacturer advises to titrate dose/dosing interval according to the clinical response. See <a href="Precautions">Precautions</a> for more detail.		
	Preparation	<ul> <li>Add 1 mL of water for injection to the hydralazine ampoule.</li> <li>Concentration = 20 mg/mL</li> <li>Step 2 First Dilution:</li> <li>Draw up 20 mg (1 mL) and make up to 20 mL total volume with compatible fluid.</li> <li>Concentration = 20 mg/20 mL = 1 mg/mL</li> <li>Step 3 Second Dilution:</li> <li>Draw up 1250 microg (1.25 mL) of the above 1 mg/mL solution, per kg of baby's weight and make up to 50 mL total volume with sodium chloride 0.9%.</li> <li>Concentration now equal to 1 mL/hr = 25 microg/kg/hour.</li> <li>Note: Discard remaining dilutions immediately after use.</li> <li>IV infusion:</li> </ul>		
	Administration IV infusion: Infuse at the prescribed rate via syringe driver pump.			

## Related Policies, Procedures, and Guidelines

**Clinical Practice Guidelines:** 

CAHS Neonatology – Cardiac: Arrythmias

**Pharmaceutical and Medicines Management Guidelines:** 

CAHS Neonatology – Medication Administration Guideline

## References

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## **Document history**

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NSQHS Standards Applicable:	Std 1: Clinical Governance			Std 4: Medication Safety		
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