

Paeds: Glucagon

Reference No: CG-PAEDS/2017/002

Presentation:	1 mg powder and solvent for solution for injection – stored in the fridge																									
Indication:	Treatment of endogenous hyperinsulinism																									
Dose:	<p>By intramuscular injection, or by intravenous injection:</p> <p>Neonate: 200micrograms/kg (max 1mg per dose) for 1 dose Child 1 month – 1 year: 1mg for 1 dose</p> <p>By continuous intravenous infusion:</p> <p>Neonate: 1-18 micrograms/kg/hour (max 50micrograms/kg/hour), adjusted according to response Child 1 month – 1 year: 1-10 micrograms/kg/hour, adjusted according to response</p>																									
Route of administration:	Bolus dose by IV or IM injection or via continuous IV infusion. IV doses ideally administered via central line as solution has low pH and may cause venous irritation and tissue damage if extravasated.																									
Instructions for preparation and administration:	<p>IV injection: Inject 1.1mL water for injections (from the prefilled syringe provided) into the contents of the vial containing the glucagon to obtain a 1mg in 1mL glucagon solution and administer over 3-5 minutes.</p> <p>Continuous Intravenous Infusion: Contact pharmacy to prepare. In an emergency prepare as below:</p> <p>Reconstitute 1mg vial with manufacturers diluent as above and dilute to a total final volume of 25mLs with sodium chloride 0.9%. This will provide 10micrograms/kg/hour when run at 0.25mL/kg/hour</p> <p>Syringes should be changed every 24 hours and the solution monitored for signs of increased viscosity/precipitation**</p> <p><i>**Do not use the reconstituted solution if it is not clear</i></p>																									
Prescribing	<p>Neonates: prescribe on paper chart as below.</p> <p>E.g. for a 2.5kg neonate</p> <table border="1"> <thead> <tr> <th>Drug</th> <th>Drug amount in syringe</th> <th>Diluent</th> <th>Total volume (ml)</th> <th>Route</th> </tr> </thead> <tbody> <tr> <td>Glucagon</td> <td>1mg</td> <td>sodium chloride 0.9%</td> <td>25ml</td> <td>IV</td> </tr> <tr> <th>Start date</th> <th>Drug concentration per ml</th> <th>Infusion range</th> <th>Min</th> <th>Max</th> </tr> <tr> <td>22/5/19</td> <td>0.04mg/ml</td> <td>Dose/kg/time</td> <td>1 microgram/kg/hour</td> <td>50 microgram/kg/hour</td> </tr> <tr> <th>Pharm</th> <th></th> <th>ml/hr</th> <th>0.0625</th> <th>3.125</th> </tr> </tbody> </table> <p>Paediatrics: Prescribe on Lorenzo EPMA as 'see paper prescription' then prescribe on paper chart as below.</p>	Drug	Drug amount in syringe	Diluent	Total volume (ml)	Route	Glucagon	1mg	sodium chloride 0.9%	25ml	IV	Start date	Drug concentration per ml	Infusion range	Min	Max	22/5/19	0.04mg/ml	Dose/kg/time	1 microgram/kg/hour	50 microgram/kg/hour	Pharm		ml/hr	0.0625	3.125
Drug	Drug amount in syringe	Diluent	Total volume (ml)	Route																						
Glucagon	1mg	sodium chloride 0.9%	25ml	IV																						
Start date	Drug concentration per ml	Infusion range	Min	Max																						
22/5/19	0.04mg/ml	Dose/kg/time	1 microgram/kg/hour	50 microgram/kg/hour																						
Pharm		ml/hr	0.0625	3.125																						

E.g. for 15kg child:						
Drug		Drug amount in syringe		Diluent	Total volume (ml)	Route
Glucagon		1mg		sodium chloride 0.9%	25ml	IV
Start date	Drug concentration per ml	Infusion range		Min	Max	Name, Sig, Bleep
22/5/19	0.04mg/ml	Dose/kg/time		1 microgram/kg/hour	10 microgram/kg/hour	A.Doctor
Pharm		ml/hr		0.375	3.75	#1234
OKnown compatibility issues	See separate IV compatibility table.					
	Note: When administered by <i>continuous intravenous infusion</i> , do not add to infusion fluids containing calcium—precipitation may occur.					
Additional Comments:	<ul style="list-style-type: none"> Monitor potassium and calcium regularly due to risk of hypokalaemia/hypocalcaemia 					

Note: The contents of this monograph should be read in conjunction with information available in the BNFC and Medusa

References:

British National Formulary for Children accessed via www.bnfc.nice.org.uk/drug/glucagon.html#indicationsAndDoses on 05.11.19

GlucaGen Hypokit 1 mg Novo Nordisk SPC, accessed via <https://www.medicines.org.uk/emc/product/1289/smpc> on 05.11.19

Medusa Glucagon paediatric monograph accessed through <https://medusa.wales.nhs.uk/IVGuideDisplay.asp> on 05.11.19

IBM Micromedex accessed through <https://www.micromedexsolutions.com> on 05.11.19

Document control sheet

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