Diazoxide
Newborn use only

2020

Alert	Concomitant use of a thiazide diuretic is recommended. Avoid higher dose where possible. Proglycem 50mg/mL suspension contains alcohol 7.25%. Oral solution prepared by Pharmacy is preferred.
Indication	Treatment of transient or persistent neonatal hyperinsulinaemic hypoglycaemia.
Action	Opens potassium-ATP channels on pancreatic beta-cells to inhibit insulin secretion. Also occurs in cardiac and vascular smooth muscle leading to decrease in blood pressure and potential for cardiorespiratory deterioration.
Drug type	Antihypertensive, antidiuretic benzothiadiazine.
Trade name	Oral: Proglycem suspension, Proglicem capsules
Presentation	Oral: 10 mg/mL solution (prepared by Pharmacy using Proglicem 25mg or 100mg capsules); Proglycem 50 mg/mL oral suspension is commercially available as an unregistered product. IV preparations are available but beyond the scope of this formulary. Discuss with specialist.
Dose	2–5 mg/kg/dose every 8 hours OR 2.5–7.5 mg/kg/dose every 12 hours.
Dose adjustment	
Maximum dose	20 mg/kg/day, although higher doses have been reported.[14,15]
Total cumulative dose	
Route	Oral.
Preparation	Oral: Shake well before use.
Administration	Oral: Administer after feeds (preferred).
Monitoring	Blood pressure and blood glucose levels during initial treatment. Sodium and fluid retention (urine output, electrolytes and weight). Consider monitoring albumin and liver function.[1]
Contraindications	Hypersensitivity to thiazide derivatives.
Precautions	Avoid sodium and water overload. Concomitant use of a thiazide diuretic is recommended. Avoid higher doses where possible. Use with caution in premature infants – increased risk of cardiorespiratory complications. Use with caution in jaundice – may displace bilirubin from albumin. Reduce dose in infants with renal impairment. Use with caution in infants with hepatic impairment. Use with caution in mechanical hypertension, e.g. secondary to aortic coarctation or arteriovenous shunt. Use with caution in pulmonary hypertension.
Drug interactions	Concomitant administration of diuretics may result in potentiation of the hyperglycaemic, hyperuricaemic or hypotensive effect of diazoxide.
Adverse reactions	Tolerance to diazoxide is usually good. Severe adverse effects include sodium and fluid retention which may precipitate congestive heart failure in patients with compromised cardiac reserve. Usually responds to diuretic therapy. Life-threatening episodes of pulmonary hypertension were observed in some neonates receiving diazoxide.[2] Prematurity and higher diazoxide doses are risk factors for cardiovascular side effects.[3] Severe hypotension can be controlled with sympathomimetic agents if necessary. With prolonged use, hypertrichosis can sometimes be marked and distressing in young children, but will be reversible after treatment cessation. Haematological side effects are very rare with the usual doses. Overdose of diazoxide produces hyperglycaemia and possibly ketoacidosis which should be treated promptly with insulin and restoration of fluid and electrolyte balance.
Compatibility	Not applicable.
Incompatibility	Not applicable.
Stability	Oral solution: Refer to expiry on bottle
Storage	10mg/mL oral solution (prepared by Pharmacy): Store according to instructions on bottle. 50mg/mL oral suspension: Store at 25°C. Protect from light

Excipients	Proglycem 50mg/mL suspension contains alcohol 7.25%, sorbitol, chocolate cream flavour, propylene glycol, magnesium aluminum silicate, carboxymethylcellulose sodium, mint flavour, sodium benzoate, methylparaben, hydrochloric acid or sodium hydroxide, poloxamer 188, propylparaben, purified water (ref: Product Info) Proglicem capsules contain lactose, magnesium stearate (ref: Product info)
Special comments	Concomitant use of a thiazide diuretic is recommended to counter sodium and fluid retention from use of diazoxide.[4, 5] Oral diazoxide preparations are not registered in Australia. Complete a Special Access Scheme - Category C form and obtain parental consent.
Evidence	**Efficacy:** There are no clinical trials of diazoxide for management of hyperinsulinaemic hypoglycaemia. Transient and syndromic hyperinsulinaemic hypoglycaemia tends to be diazoxide responsive, whereas other genetic forms affecting the K-ATP channel and incretin receptors, and infants with insulinomas, are variably responsive.[2-4, 6-9] (LOE IV, GOR C) **Pharmacokinetics:** Not reported in newborns or children. Long half-life in adults (48 hours), 94% protein bound (albumin), and renally excreted.[10, 11] Albumin binding and renal clearance of diazoxide reduced in renal failure.[12] (LOE – none in infants) **Safety:** High rate of reported complications: Total 37%; circulatory complications 19%; oedema 17%; oliguria 5%; reopening of the ductus arteriosus 4%; hypertrichosis 15%; hyperkalaemia 4%; deterioration of liver function 1%; others 8%.[3] (LOE IV, GOR C).
Practice points	
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