Diazoxide

10 mg/mL Oral Suspension (SAS) WCHN Product*

Note:

This guideline provides advice of a general nature. This statewide guideline has been prepared to promote and facilitate standardisation and consistency of practice, using a multidisciplinary approach. The guideline is based on a review of published evidence and expert opinion.

Information in this statewide guideline is current at the time of publication.

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Health practitioners in the South Australian public health sector are expected to review specific details of each patient and professionally assess the applicability of the relevant guideline to that clinical situation.

If for good clinical reasons, a decision is made to depart from the guideline, the responsible clinician must document in the patient's medical record, the decision made, by whom, and detailed reasons for the departure from the guideline.

This statewide guideline does not address all the elements of clinical practice and assumes that the individual clinicians are responsible for discussing care with consumers in an environment that is culturally appropriate and which enables respectful confidential discussion. This includes:

- The use of interpreter services where necessary,
- Advising consumers of their choice and ensuring informed consent is obtained,
- Providing care within scope of practice, meeting all legislative requirements and maintaining standards of professional conduct, and
- Documenting all care in accordance with mandatory and local requirements

Caution

Diazoxide should only be used for refractory hypoglycaemia. Consider consultation with Endocrinology and a level 6 NICU. Use with caution due to potential for fluid retention and circulatory overload. Use in prematurity should be carefully considered due to a higher risk of side effects

Dose and Indications

Treatment of Hyperinsulinism/Hypoglycaemia in Neonates

*****After Consultation with a Neonatologist*****

Oral

2 to 5 mg/kg/dose every 8 hours.

For severe hypoglycaemia, commence therapy at the higher dose and reduce according to response. A maximum of 20 mg/kg/day may be required by some neonates.

Preparation and Administration

Oral

***Oral suspension is manufactured by Women's and Children's Health Network (WCHN) Pharmacy**

The oral suspension (WCHN) contains 10 mg/mL diazoxide:

Dose	5 mg	10 mg	15 mg	20 mg	25 mg
Volume	0.5 mL	1 mL	1.5 mL	2 mL	2.5 mL

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Diazoxide is not registered in Australia and is accessed under the Special Access Scheme (SAS). Parental consent must be received prior to use and an SAS form completed. Where using the Women's and Children's oral mixture, SAS approval for the 100 mg capsule is required (as these are used to manufacture the oral mixture).

Adverse Effects

Common

Sodium and fluid retention, tachycardia, flushing, gastrointestinal symptoms (with chronic use), hypotension (particularly with concurrent us of diuretics), hypertrichosis (chronic use, reversible).

Infrequent

Fever, rash, lymphadenopathy, hyperuricaemia, constipation.

Rare

Neutropenia, eosinophilia, thrombocytopenia, pulmonary hypertension (prematurity and higher doses are risk factors).

Monitoring

- Blood glucose and blood pressure during initial treatment.
- Sodium and fluid balance.
- Consider monitoring albumin and liver function.
- Full blood count.

Practice Points

- Hyperglycaemia usually occurs within a few hours of dose administration. If no response observed with the maximum dose, diazoxide is unlikely to be effective and endocrine advice should be sought.
- The dose can be reduced gradually once normoglycemia has been achieved, continue to monitor blood glucose levels at least 24 hours after cessation of diazoxide.
- Fluid retention associated with use can be decreased by the addition of chlorothiazide, which may further reduce insulin secretion.
- Diazoxide binds to the SUR1 and Kir6.2 components of the ATP dependent potassium channel (K_{ATP}) on the β cell, keeping this channel 'open' and thereby preventing insulin release. Diazoxide will be ineffective where hyperinsulism is due to mutations in genes coding for the SUR1 and Kir6.2 components of the K_{ATP} channel. Endocrinology consultation should be sought.
- Use with caution in newborns with increased bilirubinaemia as diazoxide may displace bilirubin from albumin.

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Document Ownership & History

Developed by: Maternal, Neonatal & Gynaecology Strategic Executive Leadership Committee

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Approved by: Clinical Guideline Domain Custodian

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CGSQ number: NMG066

History:
Is this a new Neonatal Medication Guideline (V1)? **N**
Does this Neonatal Medication Guideline amend or update and existing Neonatal Medication Guideline? **Y**
If so, which version? V3
Does this Neonatal Medication Guideline replace another Neonatal Medication Guideline with a different title? **N**
If so, which Neonatal Medication Guideline (title)?

Approval Date	Version	Who approved New/Revised Version	Reason for Change
30/07/2024	V4	Clinical Guideline Domain Custodian	Formally reviewed in line with 5 year scheduled timeline for review.
11/10/17	V3	SA Safety and Quality Strategic Governance Committee	Formally reviewed in line with 5 year scheduled timeline for review.
1/05/15	V2	SA Safety and Quality Strategic Governance Committee	Formally reviewed dosing.
1/09/13	V1	SA Safety and Quality Strategic Governance Committee	Original SA Safety and Quality Strategic Governance Committee approved version.

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