South Australian Neonatal Medication Guidelines

aciclovir

250mg/10mL injection, 3% eye ointment

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

Synonyms

acyclovir, acycloguanosin

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NeoMed@health.sa.gov.au

Government of South Australia
SA Health

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Dose and Indications

Neonates presenting with chickenpox who are unwell (eg, poor feeding, tachypnoea), whether or not they received Varicella Zoster Immune Globulin (VZIG)

Any immunocompromised neonate who develops chickenpox, including those who are premature or being treated with corticosteroids, whether or not they received VZIG.

Any otherwise high risk neonate (judged by the clinician) who develops chickenpox and in whom VZIG prophylaxis was not given within 24 hours of exposure.

Herpes simplex treatment or prophylaxis.

Intravenous

Corrected Age Gestational Age PLUS Postnatal Age (weeks)	Dose (mg/kg/dose)	Frequency (hours)
< 34 weeks	20mg/kg/dose	every 12 hours
> 34 weeks	20mg/kg/dose	every 8 hours

Consider adjusting the dosing interval frequency in significant renal impairment. Discuss with senior clinician.

Length of therapy should be guided by clinical picture, underlying pathology and specialist consultation; however, usually for a minimum of 7 days.

Ocular

Apply 1 cm five times a day

Treat for 14 days or for at least 3 days after healing is complete, whichever is shorter.

Use with intravenous therapy under ophthalmologist's supervision

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Preparation and Administration

Intravenous

Dilute 2mL of the 25mg/mL aciclovir injection with 8mL sodium chloride 0.9% (to a total volume of 10mL). The resulting solution contains 5mg/mL aciclovir.

Dose	10mg	20mg	30mg	40mg	50mg
Volume	2mL	4mL	6mL	8mL	10mL

Shake well to ensure thorough mixing.

Infuse over 1 hour.

Discard remaining solution.

Store at room temperature, to prevent precipitation.

A more concentrated 25mg/mL solution can be infused intravenously (also over one hour) if the patient is severely fluid restricted. However, there is a higher risk of phlebitis and inflammation at the infusion site.

Ocular

Clean the eye of all secretions. Place the neonate on their back. Do not touch the patient with the tip of the tube. Pull lower lid down and squeeze out a line of ointment. By rotating the tube when you reach the outer eye, you will help detach the ointment from the tube.

Compatible Fluids

Glucose 5%, sodium chloride 0.9%

Adverse Effects

Common

Vomiting, diarrhoea, encephalopathy, injection site reactions, neutropenia

Infrequent

Agitation, oedema, renal impairment, constipation, rash

Rare

Coma, seizures, leucopenia, crystalluria, hepatitis, Stevens-Johnson syndrome, toxic epidermal necrolysis.

Anaphylactic shock is not commonly seen in the neonates

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Monitoring

- Periodic full blood count
- Periodic renal and liver function

Practice Points

- Oral acyclovir has poor oral bioavailability. Intravenous administration is the preferred route in neonates
- Risk of renal impairment may be reduced by:
- Infusion over 1 hour;
- Adequate hydration especially for a few hours following infusion, when urine concentrations are at their maximum;
- Dose adjustment for patients with renal impairment; and
- Avoiding concomitant use of nephrotoxic drugs (eg aminoglycosides, vancomycin)
- Discard the solution if visual turbidity or crystallisation occurs before or during infusion
- Maternal chickenpox in the peripartum period poses a risk of severe neonatal varicella, with a mortality rate up to 30%. The timing of maternal infection in relation to delivery determines the risk to the infant
- If required, Varicella Zoster Immunoglobulin (VZIG) should be given to the baby as early as possible after delivery or exposure, but must be within 72 hours.

Reference

1. Heuchan AM, Isaacs D, on behalf of the Australasian Subgroup in Paediatric Infectious Diseases of the Australasian Society for Infectious Diseases: The management of varicella-zoster virus exposure and infection in pregnancy and the newborn period. MJA 2001; 174: 288-292

Version control and change history

PDS reference: OCE use only

Version	Date from	Date to	Amendment
1.0	November 2012	current	Original version

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