Cyclopentolate

0.5% eye drops

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

Dose and Indications

Mydriasis and cycloplegia for the purpose of retinal examination in preterm and term babies under the supervision of an ophthalmologist or paediatrician

Topical

1 drop into the appropriate eye 30 to 60 minutes prior to eye examination

Preparation and Administration

Topical

Neonates are particularly prone to systemic absorption. **Apply gentle finger pressure to the lacrimal sac (the inner corner of the eye to block the tear duct) for up to 2 minutes following application. Wipe away any excess medication.**

Avoid touching the conjunctiva with the tip of the dispenser and discard unused solution.

Adverse Effects

Common

Stinging on instillation, transient intraocular pressure elevation (especially in pre-existing ocular hypertension).

Infrequent

Transient ileus/delayed gastric emptying and apnoea due to systemic absorption, persistent ocular irritation

Rare

Necrotising enterocolitis (NEC), seizures and cardiopulmonary arrest have been described rarely in case reports.

Monitoring

- Preterm babies undergoing an examination for retinopathy should be monitored for at least 24 hours if less than 36 weeks post-conception or if they have reacted with apnoea to the previous examination. Babies greater than 36 weeks post-conception do not require routine monitoring.
- Assess for signs of ileus prior to feeding after eye examination

Practice Points

- The SA Neonatal Medication Guidelines working group acknowledge the manufacturers warning against use of cyclopentolate in preterm babies and infants. Due to the overall low risk of systemic side effects with concentrations used in monitored hospital inpatients and given the lack of alternative agents and formulations available, the use of cyclopentolate in this population has been included in this guideline. The working group strongly encourage the use of strategies to reduce systemic absorption such as the application of lacrimal sac pressure following administration.
- Maximal mydriasis occurs after 30-60 minutes; duration of action is 24 hours. Maximal cycloplegia occurs after 25-75 minutes; duration of action is 6-24 hours.
- Mydriasis can precipitate acute angle-closure glaucoma (usually in those who are predisposed to the condition because of a shallow anterior chamber).
- A second application of drops may be required after 15 minutes if pupils have not started dilating, especially in babies with darker irises.
- Usually used in combination with phenylephrine.
- If multiple eye drops or doses are required, separate doses by 2 to 5 minutes to allow for absorption.

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