Amethocaine (Tetracaine) 2018

Newborn Use Only

Alert	Prolonged ophthalmic use is not recommended due to risk of severe keratitis and corneal adverse effects. Safety data is lacking and therefore use the lowest concentration available.
Indication	Local anaesthesia for eye examination (including RetCam) and procedures (laser) in newborn infants in conjunction with other pharmacological and/or non-pharmacological analgesic methods.
Action	Local anaesthetic.
Drug Type	Ester-type local anaesthetic.
Trade Name	Minims Amethocaine Eye Drops (Tetracaine (amethocaine) hydrochloride)
Presentation	Eye drops 0.5% (5 mg/mL), 1% (10 mg/mL) approximately 0.5 mL. Excipients include hydrochloric acid and purified water. No preservatives.
Dosage / Interval	One drop each eye as required 1–5 minutes prior to examination. Further drops may be needed to achieve a complete anaesthetic effect.
Maximum daily dose	No information.
Route	Topical instillation into the eyes from the container or use a microdrop (5–7 microL) cannula.
Preparation/Dilution	Eye drops (clear, colourless, sterile) 0.5% (5 mg/mL), 1% (10 mg/mL), approximately 0.5 mL.
Administration	Apply pressure to the lacrimal sac during and for 60 seconds after instillation of eye drop to minimise systemic absorption. Wipe away excess medication. Normal corneal sensitivity can be expected after approximately 1 hour.
Monitoring	
Contraindications	Hypersensitivity to any of the components of the preparation. Eye infection.
Precautions	The cornea may be damaged by prolonged or frequent application of anaesthetic eye drops. Prolonged use of topical ophthalmic local anaesthetics has been associated with severe keratitis and permanent corneal opacification and scarring with accompanying reduction of visual acuity or visual loss. Systemic toxicity typical of local anaesthetics could occur if sufficient amounts were absorbed systemically. Systemic absorption of tetracaine (amethocaine) may be reduced by compressing the lacrimal sac at the medial canthus for a minute during and following the instillation of the drops.
Drug Interactions	Metabolism may be inhibited by anticholinesterases with prolongation of the effects of tetracaine (amethocaine). May competitively enhance the neuromuscular blocking action of suxamethonium.
Adverse Reactions	Local burning and stinging sensation. Blurred vision, keratitis, hyperaemia, lacrimation and allergic conjunctivitis. Systemic (if systemic absorption occurs) – Rare. Apnoea, cardiac arrest, ventricular arrhythmias, irritability and excitation. Prolonged ophthalmic use may lead to severe keratitis and corneal adverse effects.[10] For decontamination after eye exposure, irrigate eyes with sodium chloride 0.9%.
Compatibility	Cyclopentolate, phenylephrine, tropicamide
Incompatibility	No information.
Stability	Discard immediately after use.
Storage	Store at 2°C to 8°C. (Refrigerate. Do not freeze.) Protect from light. Each Minims unit should be discarded after a single use.
Special Comments	Not approved for use in preterm infants by FDA (Food and Drug Administration of USA) in view of the immaturity of the enzyme system that metabolises the ester type of local anaesthetic.[11] The American Academy of Ophthalmology in January 2013 suggested the use of proparacaine to assess premature infants.[12] Proparacaine is not registered in Australia. Consensus among Australian ophthalmologists during the development of this formulary was to continue to use tetracaine(amethocaine) as no reported adverse effects in neonates in Australia.
Evidence summary	Refer to full version.

References	Refer to full version.

Original version Date: 13/03/2018	**Author: NMF Consensus Group**
Current Version number: 1	**Current Version Date:** 13/03/2018
Risk Rating: Medium	**Due for Review:** 13/03/2021

Authors Contribution

Original author/s	David Osborn
Expert review	Mark Jacobs, Hughie Tsang, Kimberley Tan
Evidence Review	David Osborn
Nursing Review	Eszter Jozsa
Pharmacy Review	Jing Xiao
Final content and editing review of the original	Ian Whyte
Electronic version	Mariella De Rosa, Cindy Chen, Ian Callander
Facilitator	Srinivas Bolisetty