

SIDE-EFFECTS, FURTHER INFORMATION Systemic absorption can follow topical application to the eyes; consider side effects listed for systemically administered beta blockers.

- **PRESCRIBING AND DISPENSING INFORMATION** Although multi-dose (Levobunolol) eye drops commonly contain preservatives, preservative-free unit dose vials may be available.

- **MEDICINAL FORMS** There can be variation in the licensing of different medicines containing the same drug.

Eye drops

EXCIPIENTS: May contain Benzalkonium chloride, disodium edetate, sodium metabisulfite

- ▶ **Betagan** (Allergan Ltd)

Levobunolol hydrochloride 5 mg per 1 ml Betagan Unit Dose 0.5% eye drops 0.4ml unit dose | 30 unit dose [PoM] £9.98 DT = £9.98

F 109

31-Jul-2019

Timolol maleate

● INDICATIONS AND DOSE

Primary congenital and primary juvenile glaucoma [for a transitional period, before surgery or following failed surgery]

▶ TO THE EYE

- ▶ Child: Apply once daily; increased if necessary up to 2 drops daily, max. two drops daily into each affected eye. If applied twice daily, to be applied 12 hours apart. The lowest concentration solution that controls symptoms should be used

TIMOPTOL-LA[®]

Reduction of intra-ocular pressure in primary and secondary glaucoma

▶ TO THE EYE

- ▶ Child: Apply once daily

TIOPEX[®]

Reduction of intra-ocular pressure primary and secondary glaucomas

▶ TO THE EYE

- ▶ Child: Apply once daily, to be applied in the morning

- **UNLICENSED USE** Long-acting eye preparations are not licensed for use in children.
- **CONTRA-INDICATIONS** Also consider contra-indications listed for systemically administered beta blockers · bradycardia · heart block
- **CAUTIONS** Consider also cautions listed for systemically administered beta blockers · patients with corneal disease
- **INTERACTIONS** → Appendix 1: beta blockers, non-selective
- **SIDE-EFFECTS**
- ▶ **Common or very common** Eye discomfort · eye disorders · eye inflammation · vision disorders

SIDE-EFFECTS, FURTHER INFORMATION Systemic absorption can follow topical application to the eyes; consider side effects listed for systemically administered beta blockers.

- **BREAST FEEDING** Manufacturer advises avoidance.

- **NATIONAL FUNDING/ACCESS DECISIONS**

TIOPEX[®] Scottish Medicines Consortium (SMC) decisions

The *Scottish Medicines Consortium* has advised (February 2014) that timolol gel eye drops (*TiopeX*[®]) are accepted for restricted use within NHS Scotland for the reduction of elevated intraocular pressure in patients with ocular hypertension or chronic open angle glaucoma who have proven sensitivity to preservatives.

- **MEDICINAL FORMS** There can be variation in the licensing of different medicines containing the same drug.

Eye gel

EXCIPIENTS: May contain Benzododecinium bromide

- ▶ **Timoptol-LA** (Santen UK Ltd)

Timolol (as Timolol maleate) 2.5 mg per 1 ml Timoptol-LA 0.25%

ophthalmic gel-forming solution | 2.5 ml [PoM] £3.12 DT = £3.12

Timolol (as Timolol maleate) 5 mg per 1 ml Timoptol-LA 0.5%

ophthalmic gel-forming solution | 2.5 ml [PoM] £3.12 DT = £3.12

Eye drops

EXCIPIENTS: May contain Benzalkonium chloride

- ▶ **Timolol maleate (Non-proprietary)**

Timolol (as Timolol maleate) 2.5 mg per 1 ml Timolol 0.25% eye

drops | 5 ml [PoM] £1.54 DT = £1.41

Timolol (as Timolol maleate) 5 mg per 1 ml Timolol 0.5% eye drops

| 5 ml [PoM] £1.49 DT = £1.49

- ▶ **Eysano** (Aspire Pharma Ltd)

Timolol (as Timolol maleate) 2.5 mg per 1 ml Eysano 2.5mg/ml eye

drops | 5 ml [PoM] £8.45 DT = £8.45

Timolol (as Timolol maleate) 5 mg per 1 ml Eysano 5mg/ml eye

drops | 5 ml [PoM] £9.65 DT = £9.65

- ▶ **Timoptol** (Santen UK Ltd)

Timolol (as Timolol maleate) 2.5 mg per 1 ml Timoptol 0.25% eye

drops | 5 ml [PoM] £3.12 DT = £1.41

Timolol (as Timolol maleate) 5 mg per 1 ml Timoptol 0.5% eye

drops | 5 ml [PoM] £3.12 DT = £1.49

- ▶ **TiopeX** (Thea Pharmaceuticals Ltd)

Timolol (as Timolol maleate) 1 mg per 1 gram TiopeX 1mg/g eye

gel 0.4g unit dose | 30 unit dose [PoM] £7.49 DT = £7.49

Combinations available: **Dorzolamide with timolol**, p. 737

CARBONIC ANHYDRASE INHIBITORS

Acetazolamide

20-Jan-2020

● INDICATIONS AND DOSE

Glaucoma

▶ BY MOUTH USING MODIFIED-RELEASE MEDICINES

- ▶ Child 12–17 years: 250–500 mg daily

Epilepsy

▶ BY MOUTH USING IMMEDIATE-RELEASE MEDICINES, OR BY SLOW INTRAVENOUS INJECTION

- ▶ Neonate: Initially 2.5 mg/kg 2–3 times a day, followed by maintenance 5–7 mg/kg 2–3 times a day.

- ▶ Child 1 month–11 years: Initially 2.5 mg/kg 2–3 times a day, followed by maintenance 5–7 mg/kg 2–3 times a day; maximum 750 mg per day

- ▶ Child 12–17 years: 250 mg 2–4 times a day

Reduction of intra-ocular pressure in primary and secondary glaucoma (specialist use only)

▶ BY MOUTH USING IMMEDIATE-RELEASE MEDICINES, OR BY INTRAVENOUS INJECTION

- ▶ Child 1 month–11 years: 5 mg/kg 2–4 times a day, adjusted according to response; maximum 750 mg per day
- ▶ Child 12–17 years: 250 mg 2–4 times a day

Raised intracranial pressure

▶ BY MOUTH USING IMMEDIATE-RELEASE MEDICINES, OR BY SLOW INTRAVENOUS INJECTION

- ▶ Child 1 month–11 years: Initially 8 mg/kg 3 times a day, then increased if necessary up to 100 mg/kg daily

- **UNLICENSED USE** Not licensed for the treatment of glaucoma.
- **CONTRA-INDICATIONS** Adrenocortical insufficiency · hyperchloraemic acidosis · hypokalaemia · hyponatraemia · long-term administration in chronic angle-closure glaucoma
- **CAUTIONS** Avoid extravasation at injection site (risk of necrosis) · diabetes mellitus · impaired alveolar ventilation (risk of acidosis) · long-term use · pulmonary obstruction (risk of acidosis) · renal calculi