ISOPTO® HOMATROPINE

Homatropine hydrobromide eye drops 2.0%

Presentation

ISOPTO Homatropine (homatropine hydrobromide) is an anticholinergic prepared as a sterile topical ophthalmic solution.

Each mL contains: Active: Homatropine Hydrobromide 2.0%. Preservative: Benzalkonium Chloride 0.01%. Vehicle: Hydroxypropyl Methylcellulose 0.5%. Inactive: Sodium Chloride, Polysorbate 80, Sodium Hydroxide and/or Hydrochloric Acid (to adjust pH), Purified Water.

Uses

Actions

This anticholinergic preparation blocks the responses of the sphincter muscle of the iris and the accommodative muscle of the ciliary body to cholinergic stimulation, producing pupillary dilation (mydriasis) and paralysis of accommodation (cycloplegia).

Pharmacokinetics

Unknown.

Indications

A moderately, long-acting mydriatic and cycloplegic for refraction and in the treatment of inflammatory conditions of the uveal tract. For pre- and post-operative states when mydriasis is required. Use as an optical aid in some case of axial lens opacities.

Dosage and Administration

For refraction, instill one or two drops topically in the eye(s). May be repeated in five to ten minutes if necessary. For uveitis, instill one or two drops topically up to every three to four hours. Individuals with heavily pigmented irides may require larger doses. Only the 2% strength should be used in pediatric patients.

Contraindications

Contraindicated in persons with primary glaucoma or a tendency towards glaucoma, e.g., narrow anterior chamber angle, and in those persons showing hypersensitivity to any component of this preparation. Children less than 12 years are also contraindicated (see WARNINGS and PRECAUTIONS).

Warnings and Precautions

For topical use only - not for injection.

Use with caution in patients, especially children, who have previously had a severe systemic reaction to atropine. Risk-benefit should be considered when the following medical problems exist: keratoconus (homatropine may produce fixed dilated pupil); Down's syndrome, children with brain damage and the elderly (increased susceptibility). In infants and small children, use with extreme caution.

To avoid excessive systemic absorption the lacrimal sac should be compressed by digital pressure for two to three minutes after instillation. ISOPTO® Homatropine Eye Drops may cause increased intraocular pressure (See ADVERSE REACTIONS). The possibility of undiagnosed glaucoma should be considered in some patients, such as elderly patients. To avoid angle closure glaucoma, determine the intraocular pressure and an estimation of the depth of the angle of the anterior chamber should be made prior to initiation of therapy.

ISOPTO® Homatropine Eye Drops-induced psychotic reactions and behavioural disturbances may occur in patients with increased susceptibility to anticholinergic drugs (See ADVERSE EFFECTS). Excessive topical use of this drug can potentially lead to a confusional state characterized by delirium,

agitation, and rarely coma. This state is more apt to occur in the paediatric and geriatric age groups. The specific antidote for this systemic syndrome is injectable physostigmine salicylate.

Patients may experience sensitivity to light and should protect eyes in bright illumination.

Because of risk of provoking hyperthermia, use with caution in patients, especially children, who may be exposed to elevated environmental temperatures or who are febrile.

Nasolacrimal occlusion or gently closing the eyelid after administration is recommended. This may reduce the systemic absorption of medicinal products administered via the ocular route and result in a decrease in systemic adverse reactions.

No contact lenses should be worn under ISOPTO® HOMATROPINE treatment.
This product contains benzalkonium chloride which may cause eye irritation and is known to discolour soft contact lenses.

Patient Warning
Patient should be advised not to drive or engage in other hazardous activities while pupils are dilated. Patient may experience sensitivity to light and should protect eyes in bright illumination during dilation. Parents should be warned not to get this preparation in their child's mouth and wash their own hands and the child's hands following administration. Do not touch dropper tip to any surface, as this may contaminate the solution.

Carcinogenesis, Mutageneis, Impairment of Fertility
There have been no long-term studies done using homatropine hydrobromide in animals to evaluate carcinogenic potential.
Studies have not been performed to evaluate the effects of topical ocular administration of homatropine on fertility.

Pregnancy
Pregnancy Category C.
There are no or limited amount of data from the use of ISOPTO® Homatropine Eye Drops in pregnant women. Animal reproduction studies have not been conducted with homatropine hydrobromide. Animal studies are insufficient with respect to reproductive toxicity. It is also not known whether homatropine hydrobromide can cause foetal harm when administered to a pregnant woman or can affect reproduction capacity.
Homatropine hydrobromide should be given to a pregnant woman only if clearly needed.

Nursing Mothers
It is not known whether this drug is excreted in human milk. However, homatropine and other antimuscarinic agents have been shown to adversely affect lactation in preclinical and in clinical studies. Therefore, ISOPTO® Homatropine Eye Drops should not be used during breast feeding.

Paediatric Use
ISOPTO® HOMATROPINE Eye Drops is contraindicated in children less than 12 years because of the risk of serious systemic side effects (See CONTRAINDICATIONS, ADVERSE EFFECTS AND OVERDOSAGE). When dosed in older children the lowest strength should be used.

Premature and small infants, young children, or children with Down syndrome, spastic paralysis or brain damage are particularly susceptible to central nervous system disturbances, cardiopulmonary and gastrointestinal toxicity from systemic absorption of homatropine. Use with extreme caution, if at all, in infants, small or premature children, or children with Down syndrome, spastic paralysis or brain damage.

Fair-skinned children with blue eyes may exhibit an increased response and/or increased susceptibility to adverse reactions.

Observe infants closely for at least 30 minutes following instillation.

Parents should be warned not to get this preparation in their children's mouth or cheeks and to wash their hands and the child's hands or cheeks following administration.

Effects on ability to drive and use machines
Homatropine may cause drowsiness, blurred vision and sensitivity to light. Patients receiving ISOPTO® Homatropine Eye Drops should be advised not to drive or engage in other hazardous activities while pupils are dilated and until vision is clear.

Adverse Effects
Transient symptoms of stinging and burring may occur. Prolonged use may produce local irritation characterized by follicular conjunctivitis, vascular congestion, edema, exudate, and an eczematoid dermatitis. Thirst or dryness of mouth, eye irritation not present before therapy, or increased sensitivity of eyes to light may occur.

Post Marketing Experience
The following adverse reactions have been described with the use of topical ophthalmic homatropine. Frequencies cannot be estimated from the available data. Within each System Organ Class adverse reactions are presented in order of decreasing seriousness.

Eye disorders
Conjunctivitis, photophobia, mydriasis (drug effect prolonged), eye pain, eye oedema, eye discharge, eye irritation, ocular hyperaemia

Psychiatric disorders
Confusional state

Nervous system disorders
Somnolence

Cardiac disorders
Heart rate increased

Description of selected adverse reactions
Prolonged use may produce local irritation characterized by conjunctivitis (follicular), ocular hyperaemia, eye oedema and eye discharge.

This drug produces reactions similar to those of other anticholingergic drugs. The central nervous system manifestations such as ataxia, incoherent speech, restlessness, hallucinations, hyperactivity, seizures, disorientation as to time and place, and failure to recognize people are possible. Other toxic manifestations of anticholinergic drugs are skin rash, abdominal distention in infants, unusual drowsiness, tachycardia, hyperpyrexia, vasodilation, urinary retention, diminished gastrointestinal motility, and decreased secretion in salivary and sweat glands, pharynx, bronchi and nasal passages. Severe reactions are manifested by hypotension with rapid progressive respiratory depression.

Symptoms of toxicity are usually transient (lasting a few hours), but may last up to 24 hours.

Mydriatics may increase intraocular pressure and provoke glaucoma attacks in patients predisposed to acute angle closure in particular geriatric patients (see WARNINGS and PRECAUTIONS).

Paediatric population

Use of topical ophthalmic anticholinergics has been associated with psychotic disorders and behaviour changes such as agitation and confusional state in paediatric patients. Central nervous system reactions manifest similar to those listed above.

ISOPTO® HOMATROPINE Eye Drops can cause hyperpyrexia in children.

Increased risk for systemic toxicity has been observed in premature and small infants, young children, or children with Down syndrome, spastic paralysis or brain damage with this class of drug

Interactions

The effects of ISOPTO® Homatropine Eye Drops may be enhanced by concomitant use of other drugs having antimuscarinic properties, such as amantadine, some antihistamines, phenothiazine antipsychotics, and tricyclic antidepressants.

Overdosage

Systemic homatropine toxicity may occur following topical use, particularly in children. It is manifested by flushing and dryness of the skin (a rash may be present in children), blurred vision, a rapid and irregular pulse, fever, abdominal distention in infants, convulsions, mental aberration (hallucinosis) and loss of neuro-muscular coordination. In severe cases, central nervous system depression, circulatory and respiratory failure, paralytic ileus, confusion, psychoses, agitation, delusions, delirium, and paranoia may be encountered as well as tachycardia, dysrhythmias, hypertension, seizures, coma and death. Atropine poisoning, although distressing, is rarely fatal even with large doses of atropine, and is self-limited if the cause is recognized and the homatropine medication is discontinued. Treatment includes symptomatic and supportive measures including maintaining a patent airway and assisting respiration if needed. Treat hyperthermia, coma and seizures if they occur (1). In infants and children, the body surface must be kept moist. Excitement may be controlled by diazepam or a short-acting barbiturate. For ingestion, activated charcoal can be used to prevent drug absorption. If necessary ipecac or another cathartic may be useful for drug removal during initial treatment (1,2). Physostigmine is used as an antidote to the systemic effects of atropine and may be administered parenterally to provide more prompt relief of intoxication. Parenteral physostigmine may be particularly useful in cases of pronounced hallucinations, agitation in which a patient may be dangerous to himself or others, arrhythmias resulting in uncontrolled hemodynamic instability, and intractable seizures.

In Australia, contact Poisons Information Centre on 13 11 26; in New Zealand call 0800 POISON or 0800 764 766 for advice on management.

Pharmaceutical Precautions

Store below 25°C.
Do not freeze.

Medicine Classification

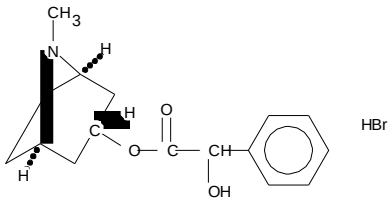
Prescription Medicine.

Package Quantities

In 5 mL plastic DROP-TAINER® dispensers.

Further Information

The active ingredient is represented by the chemical structure:



Established name:
Homatropine Hydrobromide

Chemical name:
Benzeneacetic acid, -hydroxy-, 8-methyl-8-azabicyclo[3.2.1]-oct-3-yl ester, hydrobromide, *endo*-(±)-.

References

1. Kirk M, Kulig K, Rumack BH. Anticholinergics. In: Clinical Management of Poisoning and Drug Overdose, Second Edition. Edited by Haddad LM, Winchester,JF. Philadelphia, W.B. Sauders Company, 1990, p861 –867.

2. Tani SA. Anticholinergics. In: Poisoning and Drug Overdose. Second Edition. Olson KR. Norwalk, CT, Appleton & Lange 1994, p 75-76.

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