Cyclogyl® 1 % Eye Drops Solution

PROFESSIONAL INFORMATION

SCHEDULING STATUS: **S 4**

1 NAME OF THE MEDICINE

CYCLOGYL® 1 % Eye Drops Solution

2 QUALITATIVE AND QUANTITATIVE COMPOSITION

Cyclopentolate hydrochloride 10 mg per ml.

Preserved with benzalkonium chloride 0,01 % (m/v).

for full list of excipients, see section 6.1.

3 PHARMACEUTICAL FORM

Eye Drops Solution

A clear, colourless liquid.

4 CLINICAL PARTICULARS

4.1 Therapeutic indications

For mydriasis and cycloplegia in diagnostic procedures.

4.2 Posology and method of administration

ADULTS: One drop followed by a second drop in 5 minutes.

In refractions where prolongation of cycloplegia is desirable, one additional drop only is recommended. Although complete recovery usually occurs in 24 hours, 1 or 2 drops of 1 % and 2 % pilocarpine reduces recovery time to 3 to 6 hours in most eyes.

Tonometric examination prior to drop instillation is advisable.

CHILDREN: Pre-treatment with CYCLOGYL on the day prior to examination usually is not necessary. One drop is instilled each time at the time of refractions, followed 10 minutes later by a second application if necessary.

Do not touch dropper tip to any surface, as this may contaminate the solution.

After cap is removed, if tamper evident snap collar is loose, remove before using product. If more than one topical ophthalmic medicinal product is being used, the medicines must be administered at least 5 minutes apart. Eye ointments should be administered last.

4.3 Contraindications

- Hypersensitivity to Cyclopentolate hydrochloride or to the inactive pharmaceutical ingredient of CYCLOGYL (see section 2).
- Should not be used in the presence of closed angle glaucoma, or patients with a narrow angle between the iris and the cornea.

4.4 Special warnings and precautions for use

Systemic reactions have followed the absorption of anticholinergic eye drops, particularly in children where psychotic reactions and behavioural disturbances and other central nervous

system (CNS) disturbances have been encountered. Use with caution in children and elderly patients, but reactions may occur at any age.

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. Systemic absorption may be minimised by compressing the lacrimal sac for a minute or two during and following instillation of the drops. Use with caution in patients, especially children, who have previously had a severe systemic reaction to atropine.

CYCLOGYL may cause increased intraocular pressure and caution must be observed when the drops are used in the elderly and others where an increase may be encountered.

The possibility of undiagnosed glaucoma should be considered in some patients, such as the elderly. Determine the intraocular pressure and an estimation of the depth of the angle of the anterior chamber prior to initiation of therapy to avoid glaucoma attacks.

Patients may experience sensitivity to light. They should wear sunglasses

in sunlight and other brightly lit places.

ELDERLY PATIENTS:

Geriatric patients are more susceptible to the effects of cyclopentolate and similar drugs (atropine) thus increasing the potential for systemic side effects. Cyclopentolate should be used with caution in the elderly because of possible undiagnosed predisposition to angle closure glaucoma.

PAEDIATRIC PATIENTS:

CYCLOGYL 1 % Eye Drops should not be used in small infants as concentrations greater than 0,5 % are not recommended due to the risk of serious systemic side effects.

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

Seizures and acute psychosis induced by cyclopentolate are especially prominent in children. CYCLOGYL should be used with caution in children, with known epilepsy. (See section 4.8)

Fair-skinned children with blue eyes may exhibit an increased response and/or increased susceptibility to side effects. Systemic toxicity has been reported in neonates following ocular administration of cyclopentolate. Observe infants closely for at least 30 minutes following instillation. Feeding intolerance (see Section 4.8) and necrotizing enterocolitis (NEC) in preterm infants may follow ophthalmic use of cyclopentolate in neonates and infants. Cases of NEC have been reported in preterm infants following administration; however, causality has not been established. It is recommended that feeding be withheld for four hours after examination in infants.

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.

CYCLOGYL contains benzalkonium chloride which may cause eye irritation and is known to discolour soft contact lenses. Avoid contact with soft contact lenses. Patients must be

instructed to remove contact lenses prior to application of CYCLOGYL and to wait 15 minutes before reinsertion.

As the possibility of adverse effects on the corneal permeability and the danger of disruption of the corneal epithelium with prolonged or repeated usage of benzalkonium chloride preserved ophthalmological preparations cannot be excluded, regular ophthalmological examination is required. Caution should be exercised in the use of benzalkonium chloride preserved topical medication over an extended period in patients with extensive ocular surface disease.

4.5 Interaction with other medicines and other forms of interaction

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

4.6 Fertility, pregnancy and lactation

Pregnancy

The safety of CYCLOGYL during pregnancy has not been established.

Breast-feeding

It is not known whether CYCLOGYL is distributed into breast milk, however cyclopentolate may be systemically absorbed.

4.7 Effects on ability to drive and use machines

CYCLOGYL has a major influence on the ability to drive and use machines. CYCLOGYL may cause drowsiness, blurred vision and sensitivity to light.

Patients receiving CYCLOGYL should be advised not to drive or engage in other hazardous activities unless vision is clear.

4.8 Undesirable effects

Transient stinging may occur when drops are instilled.

Hypersensitivity e.g. conjunctivitis may occur.

The onset of cyclopentolate toxicity occurs within 20 to 30 minutes after instillation, and although usually transient (subsiding in 4 to 6 hours), the symptoms can last 12 to 24 hours. Symptoms associated with systemic absorption of CYCLOGYL which require medical attention are ataxia, behavioural disturbances, psychotic reactions, confusion, fast or irregular heartbeat, fever, infants, hallucinations, skin rash, slurred speech, swollen stomach in thirst or dryness of mouth, unusual drowsiness, tiredness or weakness, vasodilation (flushing or redness of face).

The following symptoms need medical attention only if they continue or are bothersome: blepharo-conjunctivitis, conjunctivitis, hyperaemia, punctate keratitis, synechia, blurred vision, burning of the eye and photophobia.

The following side effects have been identified from post-marketing surveillance following administration of CYCLOGYL. Frequency cannot be estimated from the available data. Within each System Organ Class, adverse reactions are presented in order of decreasing seriousness:

System Organ Class	**MedDRA Preferred Term (v12.1)**
Immune system disorders	hypersensitivity
Psychiatric disorders	hallucination, confused state, disorientation, agitation, restlessness
Nervous system disorders	incoherent, retrograde amnesia, dizziness, headache, somnolence
Eye disorders	photophobia, drug effect prolonged (mydriasis), eye irritation, vision blurred, eye pain
Gastrointestinal disorders	vomiting, nausea, dry mouth
Skin and subcutaneous tissue disorders	erythema
General disorders and administration site conditions	gait disturbance, pyrexia, fatigue

A local or generalized allergic-type response to CYCLOGYL consisting of an urticarial rash has been described in children.

Reporting of suspected adverse reactions

Reporting suspected adverse reactions after authorisation of the medicine is important. It allows continued monitoring of the benefit/risk balance of the medicine. Health care providers are asked to report any suspected adverse reactions to SAHPRA via the "**6.04**

Adverse Drug Reactions Reporting Form", found online under SAHPRA's publications: https://www.sahpra.org.za/Publications/Index/8.

4.9 Overdose

Systemic reactions due to overdosage which have been reported are ataxia, incoherent speech, restlessness, hallucinations, disorientation, failure to recognise people and tachycardia.

Systemic 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 distension in infants, convulsions and hallucinations and the loss of neuromuscular coordination.

Severe intoxication is characterized by central nervous system depression, coma, circulatory and respiratory failure, and death.

Treatment is symptomatic and supportive.

In infants and small children the body surface must be kept moist. An ocular overdose of CYCLOGYL can be flushed from the eye(s) with lukewarm water.

5 PHARMACOLOGICAL PROPERTIES

5.1. Pharmacodynamic properties

A.15.4 Ophthalmic preparations, other.

CYCLOGYL ophthalmic solution is an anticholinergic preparation that blocks the response 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). It acts rapidly, but has a shorter duration than atropine.

5.2 Pharmacokinetic properties

Absorption

Following topical ocular administration, cyclopentolate is absorbed into the eye as well as the systemic circulation. Following topical administration of 2 drops of 1% cyclopentolate to the eye of patients undergoing cataract surgery, aqueous humor drug concentrations during surgery (55 to 125 minutes postdose) ranged from 1410 to 25,361 nM.

The corresponding plasma drug concentrations over this same interval ranged from 1.03 to 7.55 nM. In healthy female volunteers administered 1 drop of 1% cyclopentolate to each eye, a mean maximum plasma drug concentration of 2.06 ± 0.86 nM was achieved within 1 hour. In another study, plasma cyclopentolate concentrations were determined following two 30-microliter unilateral doses of 1% cyclopentolate administered 5 minutes apart. Peak plasma drug concentrations ranged from 3.3 to 15.5 ng/mL (mean: 8.3 ± 4.1 ng/mL) and were achieved within 5 to 15 minutes following the second dose.

Distribution

Aside from the aqueous humor data reported above for cataract patients, the ocular and systemic distribution of cyclopentolate has not been reported.

Biotransformation

The metabolic pathways of cyclopentolate have not been reported in the literature.

Elimination

The elimination mechanisms of cyclopentolate have not been reported in the literature.

5.3 Preclinical safety data

Nonclinical data with cyclopentolate reveal no special hazard for humans based on conventional studies of single- and repeated-dose toxicity.

6 PHARMACEUTICAL PARTICULARS

6.1 List of excipients

Benzalkonium chloride

Boric acid

Potassium chloride

sodium edetate

Purified water

6.2 Incompatibilities

None known.

6.3 Shelf life

Up to 36 months.

6.4. Special precautions for storage

Keep in a cool place below 25 °C.

6.5 Nature and contents of container

Natural Drop TainerTM bottle containing 15 ml, fitted with a natural dispensing tip as plug and red linerless screw cap.

6.6 Special precautions for disposal and other handling

Do not dispose of unused medicine in drains or sewerage systems (e.g. toilets).

7 HOLDER OF CERTIFICATE OF REGISTRATION

Alcon Laboratories SA (Pty) Ltd

Magwa Crescent West

Jukskei View, Waterfall City,

Johannesburg, 2090

8 REGISTRATION NUMBER

H.1147 (Act 101/1965)

9 DATE OF FIRST AUTHORISATION

1 October 2004

10 DATE OF REVISION OF THE TEXT

07 February 2023