

# Duobrim<sup>®</sup> LS

## Eye Drops 5ml

### (Brimonidine Tartrate IP Eye Drops)

#### COMPOSITION:

Brimonidine Tartrate IP .....	0.15% w/v
Stabilised Oxychloro Complex .....	0.005% w/v
(As preservative)	
Water for Injections IP .....	q.s.

#### Dosage form

Ophthalmic solution

#### PHARMACOLOGY

##### Pharmacodynamics

Brimonidine Tartrate is a relatively selective alpha-2 adrenergic receptor agonist.

Fluorophotometric studies in animals and humans suggests that brimonidine tartrate has a dual mechanism of action by reducing aqueous humour production and increasing uveoscleral outflow.

##### Pharmacokinetics

After ocular administration of 0.15% or 0.2% solution, plasma concentrations peaked within 0.5 to 2.5 hours and declined with a systematic half-life of approximately 2 hours.

The protein binding of brimonidine tartrate has not been studied. In humans systematic metabolism of brimonidine tartrate is extensive. It is metabolized primarily by the liver. Urinary excretion is the major route of elimination of the drug and its metabolites. Approximately 87% of an orally- administered radioactive dose was eliminated within 120 hours, with 74% found in the urine.

#### Indications

Duobrim LS Eye Drops are an alpha 2 adrenergic receptor agonist indicated for the reduction of elevated intraocular pressure (IOP) in patients with open-angle glaucoma or ocular hypertension.

#### Dosage and Administration

The recommended dose is one drop of Duobrim LS eye drops in the affected eye(s) three times daily approximately 8 hours apart. Duobrim LS eye drops may be used concomitantly with other topical ophthalmic drug products to lower the IOP. If more than one topical ophthalmic product is to be used, the different products should be instilled at least at 5 minutes apart.

#### Contraindications

Brimonidine tartrate with Oxychloro complex ophthalmic solution is contraindicated in neonates and infants (below the age of 2 years)

Brimonidine tartrate with Oxychloro complex ophthalmic solution is contraindicated in patients with a hypersensitivity to brimonidine tartrate or any component of this medication in the past.

#### Warnings and Precautions

General Although brimonidine tartrate with Oxychloro complex ophthalmic solution had a minimal effect on the blood pressure of patients in clinical studies, caution should be exercised in treating patients with severe cardiovascular disease. Brimonidine Tartrate with Oxychloro complex Ophthalmic solution may potentiate syndromes associated with vascular insufficiency. Brimonidine tartrate with Oxychloro complex Ophthalmic

solution should be used with caution in patients with depression, cerebral or coronary insufficiency. Raynaud's phenomenon, orthostatic hypotension or thromboangiitis obliterans. The patient's prescribed IOP-lowering medication should be routinely monitored IOP.

There have been reports of bacterial keratitis associated with the use of multiple dose containers of topical ophthalmic products. These containers had been inadvertently contaminated by the patients who, in most cases, had a concurrent corneal disease or a disruption of the ocular epithelial surface

Brimonidine tartrate with Oxychloro complex ophthalmic solution may cause fatigue and/or drowsiness, which may impair the ability to drive or operate machinery. Brimonidine tartrate with Oxychloro complex ophthalmic solution may cause blurred and/or abnormal vision, which may impair the ability to drive or to use machinery, especially at night or in reduced lighting. The patients should wait until these symptoms have cleared before driving or using machinery.

### **Drug Interactions**

Although the specific drug interaction studies have not been conducted with brimonidine tartrate with Oxychloro complex ophthalmic solution, the possibility of an additive and potentiating effect with central nervous system (CNS) depressants (alcohol, barbiturates, opiates, sedatives or anaesthetics) should be considered. Alpha- agonists as a class, may reduce pulse and blood pressure. Caution in using concomitant drugs such as antihypertensives and/or cardiac glycosides is advised

Tricyclic antidepressants have been reported to blunt the hypotensive effect of systematic clonidine. It is not known whether the concurrent use of these agents with brimonidine tartrate with Oxychloro complex ophthalmic solution in humans can lead to resulting interference with the IOP lowering effect. Caution, however is advised in patients taking tricyclic antidepressants.

Monoamine Oxidase (MAO) inhibitors may theoretically interfere with the metabolism of brimonidine tartrate and potentially result in an increased systematic side effect such as hypotension. Caution is advised in patients taking MAO inhibitors, which can affect the metabolism and uptake of circulating amines.

### **Use in Renal and Hepatic Impairment**

Brimonidine tartrate with Oxychloro complex ophthalmic solution has not been studied in patients with hepatic or renal impairment; caution should be used in treating such patients.

### **Pregnancy**

#### **Teratogenic Effects**

#### **Pregnancy category B**

There are no adequate and well controlled studies in pregnant women, however in animal studies, Brimonidine tartrate crossed the placenta and entered in to the foetal circulation to a limited extent. Because animal reproduction studies are not always predictive of human response, brimonidine tartrate with Oxychloro complex ophthalmic solution should be used during pregnancy only if the potential benefit to the mother justifies the potential risk to the foetus.

### **Lactation**

It is not known whether brimonidine tartrate is excreted in human milk, although in animal studies, Brimonidine tartrate has been shown to be excreted in breast milk. Because of the potential for serious adverse reactions from brimonidine tartrate with Oxychloro complex ophthalmic solution in nursing infants, a decision should be made whether to discontinue nursing or

to discontinue the drug, taking in to the account the importance of the drug to the mother.

### **Paediatric Use**

Brimonidine tartrate with Oxychloro complex ophthalmic solution is contraindicated in paediatric patients below the age of 2 years. During postmarketing surveillance, apnoea, bradycardia, coma, hypotension, hypothermia, hypotonia, lethargy, pallor, respiratory depression and somnolence have been reported in infants receiving brimonidine tartrate. The safety and effectiveness of brimonidine tartrate have not been studied in children below the age of 2 years in a well controlled clinical study conducted in paediatric glaucoma patients (aged 2 to 7years) the most commonly observed adverse reactions with brimonidine tartrate ophthalmic solution 0.2% dosed three times daily were somnolence (50% to 83% in patients aged 2 to 6 years) and decreased alertness. In paediatric patients 7 years of age (>20 kg), somnolence appears to occur less frequently (25%). Approximately 16% of patients on brimonidine tartrate ophthalmic solution discontinued from the study due to somnolence.

### **Geriatric Use**

No overall differences in safety or effectiveness have been observed between elderly and a other adult patients.

### **Undesirable effects**

Because clinical studies are conducted under widely varying conditions adverse reaction rates observed in the clinical studies of a drug cannot be directly compared to rates in the clinical studies of another drug and may not reflect the rates observed in practice.

Side effects occurring in approximately 10-20% of the subjects receiving Brimonidine Tartrate ophthalmic solution (0.1-0.2%) included allergic conjunctivitis, conjunctival hyperaemia and eye pruritus. Adverse events occurring in approximately 5-9% of the subjects included burning sensation, conjunctival folliculosis, hypertension, ocular allergic reaction oral dryness and visual disturbance. Events occurring in approximately 1-4% of subjects included abnormal taste, allergic reaction, asthenia, blepharitis, blepharoconjunctivitis, blurred vision, bronchitis, cataract, conjunctival oedema, conjunctival haemorrhage, conjunctivitis, cough, dizziness, dyspepsia, dyspnoea, epiphora, eye discharge, eye dryness, eye irritation, eye pain, eyelid oedema, eyelid erythema, fatigue, flu syndrome, follicular conjunctivitis, foreign body sensation, gastrointestinal disorders, headache, hypercholesterolaemia, hypotension, infection (primarily colds and respiratory infections) insomnia, keratitis, lid disorder, pharyngitis, photophobia, rash, rhinitis, sinus infection, sinusitis, somnolence, stinging superficial punctuate keratopathy, tearing, visual field defect, vitreous detachment, vitreous disorder, vitreous floaters and worsened visual acuity. The following events were reported in less than 1 % of subjects, corneal erosion, meiosis, bordeolum, nasal dryness, somnolence and taste perversion.

The following reactions have been identified during postmarketing use of brimonidine tartrate ophthalmic solution in clinical practice. Because they were reported voluntarily from a population of unknown size, estimates of frequency cannot be made. The reactions which have been chosen for inclusion due to seriousness, frequency of reporting, possible causal connection to brimonidine tartrate ophthalmic solution or a combination of these factors, include bradycardia, depression, hypersensitivity, iritis, keratoconjunctivitis sicca, miosis, nausea, skin reactions, including erythema, eyelid pruritus, rash and vasodilation), syncope and tachycardia, Apnoea,

bradycardia, coma, hypotension, hypothermia, hypotonia, lethargy, pallor, respiratory depression, and somnolence have been reported in infants receiving brimonidine tartrate ophthalmic solution.

### **Overdosage**

Very limited information exists on accidental ingestion of brimonidine tartrate in adults, the only adverse reaction reported to date has been hypotension. Symptoms of brimonidine tartrate overdose have been reported in neonates, infants and children receiving brimonidine tartrate with Oxychloro complex ophthalmic solution as part of the medical treatment of congenital glaucoma or by accidental oral ingestion. Treatment of oral overdose includes supportive and symptomatic therapy, a patent airway should be maintained.

### **Storage and handling instruction**

Keep in a cool place. Use the solution within one month after opening the container.

Do not touch the tip of the container to any surface. Replace cap after using . Protect from light.

**KEEP OUT OF REACH OF CHILDREN**

**NOT FOR INJECTION**

**FOR EXTERNAL USE ONLY**

### **Presentation:**

Duobrim LS is a sterile solution supplied in opaque plastic dropper bottle with a cap, Containing 5 ml of the solution.

### **Directions for use :**



Turn the tamper proof cap anti-clockwise to break the seal.



Remove the cap, dispense drops with gentle pressure.

Replace the cap immediately after every use.

Manufactured in INDIA by :

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