NATIONAL AGENCY FOR FOOD & DRUG ADMINISTRATION & CONTROL (NAFDAC)

Registration & Regulatory Affairs (R & R) Directorate

Product Name

Dexamethasone Sodium Phosphate Ophthalmic Solution USP 0.1% w/v

SUMMARY OF PRODUCT CHARACTERISTICS (SmPC)

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1. Name of the Medicinal Product

Dexamethasone Sodium Phosphate Ophthalmic Solution USP 0.1% w/v

2. Qualitative and Quantitative Composition

Composition:

Dexamethasone Sodium Phosphate USP eq. to Dexamethasone Phosphate	0.1% w/v
Phenylmercuric Nitrate	0.002% w/v
Sterile aqueous buffered vehicle	q.s.

3. Pharmaceutical Form

Ophthalmic solution

4. Clinical Particulars

4.1 Therapeutic indications

For treatment of non-infectious inflammatory conditions affecting the anterior segment of the eye.

4.2 Posology and method of administration

Dosage and Administration

This medicinal product should be used only under close ophthalmic supervision.

Posology

The usual posology is of 1 drop 4 to 6 times daily in the affected eye.

In severe cases, treatment may be started with 1 drop every hour but dose should be reduced to one drop every 4 hours when favourable response is observed. Gradual tapering off is recommended in order to avoid a relapse.

The duration of treatment will generally vary from a few days to a maximum of 14 days.

Elderly patients

There has been wide experience with the use of dexamethasone eye drops in elderly patients. The dose recommendations given above reflect the clinical data derived from this experience.

Paediatric population

Efficacy and safety have not been established in the paediatric population.

In children, long-term continuous corticosteroid therapy should be avoided due to possible adrenal suppression.

Method of administration

Ocular use.

Eythalm is a sterile solution that does not contain a preservative.

Patients should be instructed to wash their hands before use and avoid allowing the tip of the container to come into contact with the eye or surrounding structures as this could cause injury to the eye.

Patients should also be instructed that ocular solutions, if handled improperly, can become contaminated by common bacteria known to cause ocular infections. Serious damage to the eye and subsequent loss of vision may result from using contaminated solutions.

Nasolacrimal occlusion by compression of lacrimal ducts may reduce systemic absobtion

4.3 Contraindications

- Hypersensitivity to the active substance or to any of the excipients listed in.
- Eye infections not controlled by anti-infectious treatment, such as:

  Acute purulent bacterial infections including Pseudomonas and mycobacterial infections,

  Fungal infections,

  Epithelial Herpes simplex keratitis (dendritic keratitis), vaccinia, varicella zoster and most other viral infections of the cornea and conjunctiva,

  Amoebic Keratitis,
- Perforation, ulceration and injury of cornea with uncompleted epithelialisation
- Known glucocorticosteroid-induced ocular hypertension

4.4 Special warning and special precaution for use

Topical steroids should never be given for an undiagnosed red eye.

Patients should be monitored at frequent intervals during treatment with dexamethasone eye drops. Prolonged use of corticosteroid treatment may result in ocular hypertension/glaucoma (especially for patients with previous IOP induced by steroids or with pre-existing high IOP or Glaucoma) and also cataract formation, especially in children and elderly population.

The use of corticosteroids may also result in opportunistic ocular infections (bacterial, viral or fungal) due to the suppression of host response or to the delay of their healing. In addition, topical ocular corticosteroids may promote, aggravate or mask signs and symptoms of opportunistic eye infections.

Patients with an eye infection should only receive local steroid treatment when the infection has been controlled by an effective anti-infectious treatment. Such patients should be carefully and regularly monitored by an ophthalmologist.

In some particular inflammatory conditions such as episcleritis, NSAIDS are the first line treatment, Dexamethasone should be used only if NSAIDS are contra-indicated.

Patients with a corneal ulcer should generally not receive topical dexamethasone except when inflammation is the main cause of healing delay and when the appropriate aetiological treatment has already been prescribed. Such patients should be carefully and regularly monitored by an ophthalmologist.

Thinning of the cornea and sclera may increase the risk of perforations with the use of topical corticosteroids.

Corneal calcification requiring corneal graft surgery for visual rehabilitation has been reported for patients treated with ophthalmic preparations containing phosphates such as dexamethasone. At the first sign of corneal calcification the drug should be withdrawn and the patient should be switched to a phosphate-free preparation. In children, long-term continuous corticosteroid therapy should be avoided due to possible adrenal suppression.

Posterior subcapsular cataract might occur at cumulative doses of dexamethasone.

Diabetics are also more prone to develop subcapsular cataracts following topical steroid administration.

The use of topical steroids in allergic conjunctivitis is only recommended for severe forms of allergic conjunctivitis not responding to standard therapy and only for a short period.

Wearing of contact lenses during treatment with corticosteroid eye drops should be avoided.

Patients with a history of contact hypersensitivity to silver should not use this product as dispensed drops may contain traces of silver.

Cushing's syndrome and/or adrenal suppression associated with systemic absorption of ocular dexamethasone may occur after intensive or long-term continuous therapy in predisposed patients, including children and patients treated with CYP3A4 inhibitors (including ritonavir and cobicistat). In these cases, treatment should be progressively discontinued.

4.5 Interaction with other medicinal products and form of interaction

No interaction studies have been performed.

In case of concomitant treatment with other eye drops, solution, instillations should be spaced out by 15 minutes.

Superficial stromal corneal precipitations of calcium phosphate have been reported under combined use of corticosteroids and topical beta-blockers.

CYP3A4 inhibitors (including ritonavir and cobicistat): may decrease dexamethasone clearance resulting in increased effects and adrenal suppression/Cushing's syndrome. The combination should be avoided unless the benefit outweighs the increased risk of systemic corticosteroid side-effects, in which case patients should be monitored for systemic corticosteroid effects.

4.6 Pregnancy and lactation

Pregnancy

Insufficient data are available on the use of dexamethasone eye drops, solution in human pregnancy to assess possible harmful effects. Corticosteroids cross the placenta. Teratogenic effects have been observed in animals. However, there is no evidence to date that teratogenic effects are induced in humans. After systemic use of corticosteroids, at higher doses, effects on the unborn/neonate (intrauterine growth inhibition, inhibition of the function of the adrenal cortex) have been reported. However, these effects have not been reported for ocular use.

As a precautionary measure, it is preferable to avoid the use of Eythalm during pregnancy.

Breast-feeding

It is not known whether this medicine is excreted in breast milk. However, the total dose of dexamethasone is low.

Eythalm can be used during lactation.

Fertility

There are no data on potential effects of dexamethasone 1 mg/ml on fertility.

4.7 Effects on ability to drive and use machines

No studies on the effects on the ability to drive and use machines have been performed.

As with any eye drops, temporarily blurred vision or other visual disturbances may affect the ability to drive or use machines. If blurred vision occurs, the patient must wait until the vision is clear before driving or using machines.

4.8 Undesirable effects

System Organ Class	Frequency	Adverse Reactions
Eye disorders	Very common (≥1/10)	Increase of the intra-ocular pressure
	Common (≥1/100 to <1/10)	Discomfort, irritation*, burning, stinging, itching and blurred vision
	Uncommon (≥1/1,000 to <1/100)	Allergic and hypersensitivity reactions, delayed wound healing, posterior capsular cataract*, opportunistic infections, glaucoma
	Very rare (<1/10,000, including isolated reports)	Conjunctivitis, mydriasis, facial oedema, ptosis, corticosteroid-induced uveitis, corneal calcifications, crystalline keratopathy, changes in corneal thickness*, corneal oedema, corneal ulceration and corneal perforation
General disorders and administration site conditions	Uncommon (≥1/1,000 to <1/100)	Depression of adrenal function
Endocrine disorders	Not known (frequency cannot be estimated from the available data)	Cushing's syndrome, adrenal suppression

Description of selected adverse reactions

Increase of the intra-ocular pressure, glaucoma and cataract may occur. Prolonged use of corticosteroid treatment may result in ocular hypertension/glaucoma (especially for patients with previous IOP induced by steroids or with pre-existing high IOP or Glaucoma) and also cataract formation, Children and elderly patients may be particularly susceptible to steroid-induced IOP rise.

Increase of the intra-ocular pressure induced by corticosteroid topical treatment has been generally observed within 2 weeks of treatment.

Diabetics are also more prone to develop subcapsular cataracts following topical steroid administration.

Discomfort, irritation, burning, stinging, itching and blurred vision frequently may occur immediately after instillation. These events are usually mild and transient and have no consequences.

In diseases causing thinning of the cornea, topical use of steroids could lead to perforation in some cases.

Depression of adrenal function associated with systemic absorption of the product may occur when the instillations are administered with a frequent dosing schedule.

Cases of corneal calcification have been reported very rarely in association with the use of phosphate containing eye drops in some patients with significantly damaged corneas.

4.9 Overdose

In the case of topical overdose, the treatment should be stopped. In case of prolonged irritation, the eye(s) should be rinsed with sterile water.

The symptomatology due to accidental ingestion is not known. As with other corticosteroids however, the physician may consider gastric lavage or emesis.

5. Pharmacological properties

5.1 Pharmacodynamic properties

Pharmacotherapeutic group: Ophthalmologicals, anti-inflammatory agents, Corticosteroids, plain, ATC code: S01B A01

Dexamethasone sodium phosphate is a hydrosoluble inorganic ester of dexamethasone. It is a synthetic corticosteroid with an anti-inflammatory and anti-allergic action. Dexamethasone has more potent anti-inflammatory action compared to hydrocortisone (approximately 25:1) and prednisolone.

5.2 Pharmacokinetic properties

Due to its hydrophilic properties, dexamethasone sodium phosphate is barely absorbed by the intact epithelium of the cornea.

Following absorption via the eye and the nasal mucosa, dexamethasone sodium phosphate is hydrolyzed in the system to dexamethasone.

Afterwards, dexamethasone and its metabolites are mainly eliminated via the kidneys.

5.3 Preclinical Studies

Mutagenic and tumorigenic potential

Present findings yield no indications of clinically relevant genotoxic properties of glucocorticoids.

Reproductive toxicity

In animal experiments, corticosteroids have been shown to produce foetal resorptions and cleft palate. In the rabbit corticosteroids have produced foetal resorptions and multiple abnormalities involving the head, ears, limbs and palate.

In addition, intrauterine growth inhibition and changes of functional development of the central nervous system have been reported.

6.0 PHARMACEUTICAL EXCIPIENTS

6.1 List of excipients

Disodium Edetate BP
Sodium Bisulphite BP
Disodium Hydrogen Phosphate BP
Sodium Dihydrogen Phosphate BP
Polyethylene Glycol-400 BP
Creatinine USP
Phenylmercuric Nitrate USP
Water for Injection BP

6.2 Incompatibilities

None known

6.3 Shelf life

36 months Unopened
1 month once opened

6.4 Special precaution for storage

Store at temperature below 30°C. Protect from light.

6.5 Nature contents of container

Opaque White 10ml plastic vials with nozzle & cap. There is a tamper evident seal which is broken when the bottle is first opened.
Fill volume is 10ml. Each bottle is then packed into a carton.

6.6 Instruction for use handling and disposal

Keep out of reach of children.

7. Manufacturer name

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8. Marketing Authority

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