RXADVANCE
2 Park Central Drive
Southborough, MA 01772

NEW DRUG APPROVAL

Brand Name	UPNEEQ
Generic Name	oxymetazoline hydrochloride ophthalmic solution
Drug Manufacturer	RVL PHARMS

New Drug Approval

FDA Approval Date: July 8, 2020
Review Designation: Standard
Type of Review: New Drug Application 212520

Place in Therapy

DISEASE DESCRIPTION & EPIDEMIOLOGY

The superior tarsal muscle, known as Muller's muscle, is a structural muscle which functions to maintain the elevation of the upper eyelid. It receives innervation from the sympathetic nervous system and is unique in that it consists of thin fibers of the smooth muscle. Damage to this muscle, or the nerves which supply it, will result in ptosis of the affected eye as seen in Horner syndrome, a condition in which there is damage to the cervical sympathetic chain. Surgeries which involve repair of ptosis, or upper eyelid correction procedures, will usually encounter Muller's muscle and should be very precise in adjustments when resecting portions of the upper eyelid.

Among all cases of ptosis, congenital ptosis is the most common type which seems to be more prevalent in males. Simple congenital ptosis is the most prevalent form of congenital ptosis. Among acquired cases, aponeurotic ptosis is the most common type which usually presents in late adulthood. Enough data is not available yet, about the incidence of ptosis. However, the prevalence of ptosis does not seem to be affected by other epidemiological factors such as race, etc.

Efficacy

Efficacy was assessed with the Leicester Peripheral Field Test (LPFT) (primary) and photographic measurement of Marginal reflex distance 1 (MRD1). The primary efficacy endpoints were ordered in a hierarchy to compare UPNEEQ to vehicle on the mean increase from baseline (Day 1 Hour 0) in number of points seen on the top 4 rows of the LPFT in the study eye at Hour 6 on Day 1 and Hour 2 on Day 14.

Marginal reflex distance 1 (MRD1), showed a positive effect with UPNEEQ treatment. Greater MRD1 increases were observed for the UPNEEQ group than the vehicle group on day 1 at 6 hours post dose and on day 14 at 2 hours post dose.

Safety

ADVERSE EVENTS

Most common adverse reactions (incidence 1-5%) are: punctate keratitis, conjunctival hyperemia, dry eye, vision blurred, instillation site pain, eye irritation and headache.

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WARNINGS & PRECAUTIONS

- Alpha-adrenergic agonists as a class may impact blood pressure. Advise patients with cardiovascular disease, orthostatic hypotension, and/or uncontrolled hypertension or hypotension to seek medical care if their condition worsens.
- Use with caution in patients with cerebral or coronary insufficiency or Sjögren's syndrome and advise patients to seek medical care if signs and symptoms of potentiation of vascular insufficiency develop.
- Advise patients to seek immediate medical care if pain, redness, blurred vision and photophobia occur (signs and symptoms of acute angle closure).

CONTRAINDICATIONS

None.

Clinical Pharmacology

MECHANISMS OF ACTION

Oxymetazoline is an alpha adrenoceptor agonist targeting a subset of adrenoreceptors in Mueller's muscle of the eyelid.

Dose & Administration

ADULTS

Instill 1 drop in affected eye(s) once daily

PEDIATRICS

Safety and effectiveness of UPNEEQ have not been established in pediatric patients under 13 years of age.

GERIATRICS

No overall differences in safety or effectiveness were observed between subjects 65 years of age and older and younger subjects

RENAL IMPAIRMENT

None

HEPATIC IMPAIRMENT

None

Product Availability

DOSAGE FORM(S) & STRENGTH(S)

Ophthalmic solution, 0.1% oxymetazoline as salt, equivalent to 0.09% oxymetazoline as base.