Acta Scientific Ophthalmology (ISSN: 2582-3191)

Volume 7 Issue 3 March 2024

Short Communication

Ophthalmology Recent Food and Drug Administration (FDA) Approvals (Last 5 Years)

Shrinkhal* and Pragati Garg

Department of Ophthalmology, AIIMS, Raebareli, Uttar Pradesh, India

***Corresponding Author:** Shrinkhal, Department of Ophthalmology, AIIMS, Raebareli, Uttar Pradesh, India.

Received: January 22, 2024

Published: February 14, 2024

Source: https://www.fda.gov/drugs/new-drugs-fda-cders-new-molecular-entities-and-new-therapeutic-biological-products/novel-drug-approvals-2023.

Perfluorhexyloctane
Use: To treat signs and symptoms of dry eye disease
Approval date: 18.05.2023
Route: Topical
Dose: 1 drop 4 times a day in the affected eye
Chemical: Semi-fluorinated alkaline
Strength: 100% perfluorhexyloctane

Mechanism of action: Perfluorohexyloctane, a semifluorinated alkane, contains 6 perfluorinated carbon atoms and 8 hydrogenated carbon atoms. Perfluorohexyloctane forms a monolayer at the air-liquid interface of the tear film which can be expected to reduce evaporation. The exact mechanism of action for MIEBO in DED is not known.
Most common adverse effect: Blurred vision
Contraindication: None
Trade name: Meibo

Instruction: Contact lenses should be removed prior to and for at least 30 minutes after the administration of MIEBO.

Avacincaptad pegol

Use: To treat geographic atrophy secondary to age-related macular degeneration
Approval date: 08.04.2023
Route: Intra-vitreal

Dose: 2 mg (0.1 mL of 20 mg/mL solution) administered by intravitreal injection to each affected eye once monthly (approximately 28 ± 7 days) for up to 12 months
Chemical: It is an RNA aptamer, a PEGylated oligonucleotide
Strenght: 20 mg/mL in a single-dose vial
Mechanism of action: It binds to and inhibits complement protein C5. By inhibiting C5, avacincaptad pegol may prevent its cleavage to C5a and C5b thus decreasing membrane attack complex (MAC) formation.
Most common adverse effect: Conjunctival haemorrhage
Contraindication: Patients with ocular or periocular infections
Trade name: Izervay

Instruction: Proper aseptic precautions to be taken as of any intravitreal injection.

Year 2022

Source: https://www.fda.gov/drugs/new-drugs-fda-cders-new-molecular-entities-and-new-therapeutic-biological-products/novel-drug-approvals-2022.

Oomidenepag isopropyl ophthalmic solution

Use: To reduce elevated intraocular pressure in patients with open angle glaucoma or ocular hypertension
Approval date: 22.09.2022
Route: Topical
Dose: one drop in the affected eye(s) once daily in the evening
Chemical: A prodrug of omidenepag. Its chemical name is Glycine, N-[6-[[[[4-(1H-pyrazol-1-yl)phenyl]methyl](3- pyridinylsulfonyl) amino]methyl]-2-pyridinyl]-, 1-methylethyl ester
Strength: 0.002%
Mechanism of action: a relatively selective prostaglandin EP2 receptor agonist

Most common adverse effect: Pigmentation, eyelash changes, ocular inflammation, macular edema
Contraindication: To be avoided in pregnancy and lactation
Trade name: Omlonti
Instruction: To be avoided in pregnancy and lactation.

Faricimab-svoa

Use: To treat neovascular (wet) aged-related macular degeneration and diabetic macular edema(DME)

Approval date: 28.01.2022

Route: Intra-vitreal

Dose: 6 mg (0.05 mL of 120 mg/mL solution)

Chemical: Faricimab-svoa

Strength: 0.05 mL of 120 mg/mL solution

Mechanism of action: Vascular endothelial growth factor (VEGF) and angiopoietin 2 (Ang-2) inhibitor

Most common adverse effect: Conjunctival haemorrhage

Contraindication: In patients with ocular or periocular infections, known hypersensitivity.

Trade name: Vabysmo

Instruction: Each vial should only be used for the treatment of a single eye.

Year 2020

Source: https://www.fda.gov/drugs/new-drugs-fda-cders-new-molecular-entities-and-new-therapeutic-biological-products/novel-drug-approvals-2020.

Teprotumumab-trbw

Use: To treat thyroid eye disease

Approval date: 21.01.2020

Route: intravenous

Dose: administered every 3 weeks for 8 total doses

Mechanism of action: fully human monoclonal antibody that binds to the ligand binding extracellular alpha subunit of the IGF-1R

Most common adverse effect: muscle spasm, nausea, alopecia (hair loss), diarrhea, fatigue, hyperglycemia (high blood sugar), hearing loss, dry skin, dysgeusia (altered sense of taste) and headache

Contraindication: Pregnancy, Breast feeding

Trade name: Tepezza.

Year 2019

Source: https://www.fda.gov/drugs/new-drugs-fda-cders-new-molecular-entities-and-new-therapeutic-biological-products/novel-drug-approvals-2019.

Brilliant Blue G Ophthalmic Solution

Use: Eye surgery

Approval date: 20.12.2019

Chemical: Brilliant blue G

Strength: 0.025%

Trade name: Tissue Blue.

Brolucizumab–dbll

Use: To treat neovascular (wet) aged-related macular degeneration and diabetic macular edema(DME)

Approval date: 07.10.2019

Route: Intra-vitreal

Dose: 6 mg (0.05 mL of solution that is 120 mg/mL)

Chemical: Brolucizumab

Strength: 6mg/0.05 ml

Mechanism of action: VEGF-A antagonist

Most common adverse effect: Conjunctival haemorrhage

Contraindication: In patients with ocular or periocular infections, known hypersensitivity.

Trade name: Beovu

Instruction: Each vial should only be used for the treatment of a single eye.

Disclaimer

This article is only for updating the basic knowledge about recent advancements. To know the details of the drugs and usage guideline, the official website of FOOD AND DRUG ADMINISTRATION (FDA) should be visited.