

Ophthalmic Medication Update

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Financial Disclosures:

I do not have any personal relevant financial or commercial interest to disclose. My husband has a salaried position at Heidelberg Engineering as a Clinical Development Manager. He works with researchers and did not have any direct or indirect influence on this lecture.

Course Description/Summary:

Primary care physicians encounter various medical and nonmedical eye conditions that require a broad range of knowledge regarding the current medication treatment options that are currently available to patients. Having a thorough understanding of these medications is necessary in order to appropriately prescribe these medications. All eyecare providers must understand what medical conditions are indicated for the current medications, which patients are appropriate for these conditions, and which patients are not good candidates for certain therapies. A broad range of discussion of current ophthalmic medications including all of the above will be discussed.

Learning Objectives:

1. To have an increased understanding of the current medications, their mechanism of action, and the appropriate indications for each medication.
2. To have an overview of which ophthalmic conditions and which patient types might benefit from each medication.
3. To have a better understanding of the possible complications of these medications and which patients would not benefit from them.

Course Outline

I. Cosmetic Medications

- A. Ptosis Medication: Upneeq
- B. Eye whitening: Lumify
- C. Lash growing: Latisse

II. Dry Eye Medications &/or Blepharitis Treatment:

- A. New generics: generic Restasis (cyclosporine)
- B. Regener-Eyes: biologic; has anti-inflammatory cytokines, chemokines, hyaluronic acid, growth factors
- C. Lacripep (TearSolutions): 1st in class synthetic peptide-Lacritin (glycoprotein deficit in all dry eye).
- D. TP-03 (Tarsus Pharmaceuticals): lotilanier (active ingredient), treats Demodex

III. Allergy Medications:

- A. Optivar (azelastine H000gv Cl 0.05%)
- B. Zerviate (cetirizine 0.24%)

IV. Steroid Medications:

- A. Eysuvis, Inveltys
- B. Lotemax SM gel & ointment
- C. Durezol

- D. Yutig: steroid implant
- E. Dexycu: sustained release dexamethasone 9% injection
- F. Dextenza: dexamethasone intracanalicular insert 0.4 mg

V. NSAIDS:

- A. bromfenac:
 1. Daily dosing: Prolensa, Bromday
 2. BID dosing: Xibrom

VI. Refractive Medications:

- A. Myopia control medications:
 1. Atropine 0.05% vs. 0.025 vs. 0.01%
 2. MicroPine (Eyenuvia): micro-dose, uses “Optejet”
- B. Presbyopia medications:
 1. Vuity (Allergan): pilocarpine 1.25%, pHast technology
 2. Nyxol (Ocuphire Pharma)+pilo: Nyxol (phentolamine 0.75%+pilocarp. 0.4%)
 3. MicroLine (Eyenuvia): proprietary pilocarpine, “Optejet” dispenser
 4. Brimochol (Visus Therapeutics): carbachol & brimonidine
 5. PRX-100: aceclcedine & tropicamide
 6. CSF-1 (Orasis Pharmaceuticals): ingredients not disclosed (parasympathomimetic, NSAID, oil-based vehicle)
 7. EyeFocus/EyeFocus+ (OSRX Pharmaceuticals): compounded medication-low dose pilocarpine, phenylephrine, pheniramine, ketorolac
 8. Lens Softening Meds:
 - a. Dioptin/UNR844-CL (Novartis): phase 2b study planned
 - b. VP1-001 (Viewpoint Therapeutics): pre-clinical investigation
- C. Pharmacologically induced mydriasis reversal: Nyxol (0.75% phentolamine)
- D. Dim light or night vision disturbances: Nyxol (0.75% phentolamine)

VII. Glaucoma Medications:

- A. Rho Kinase Inhibitors: Rhopressa, Rocklatan
- B. Preservative-free drops: Zioptan, Cosopt PF & generic, latanoprost PF
- C. Vyzulta
- D. Xelpros
- E. Generic Lumigan: bimatoprost
- E. Durysta: sustained release bimatoprost implant *
- F. Oral beta blockers (mainly metoprolol): 20% protective effect
- G. Systemic medication considerations:
 1. SSRIs (selective serotonin reuptake inhibitors): Prozac, Zoloft, Paxil, Lexapro
30% protective effect
 2. SNRIs (serotonin-norepinephrine reuptake inhibitors): Effexor, Cymbalta
30% protective effect
 3. Oral calcium channel blockers (Norvasc-amlodipine besylate): significantly detrimental

VIII. Neurotrophic Medications:

- A. Oxervate (cenegermin 0.002%)

IX. Contact Dermatitis Medication:

- A. Protopic (tacrolimus 0.1%)

X. Grave’s Orbitopathy Medication:

- A. Tepezza (Horizon Therapeutics)

XI. AMD Medications:

- A. Vabysmo (Genentech)-faricimab-svoa; wet AMD & DME; less frequent injections; FDA approved
- B. EYP-1901 (EyePoint Pharmaceuticals)-vorolanib; wet AMD; potentially twice a year implant
- C. Zimura (Iveric Bio)-avacincaptad pegol; AMD geographic atrophy-severe disease; phase 3 clinical trials
- D. SB11 (Samsung Bioepis)-Lucentis (ranibizumab) biosimilar; wet AMD; 1st anti-VEGF biosimilar drug; much less expensive
- E. APL-2 (Apellis Pharmaceuticasl, Inc.)-pegcetacoplan; intravitreal injection ; inhibits C3; AMD geographic atrophy