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20 Oral Drugs in Optometry -- A Practitioner's Reference

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Comments

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Any comment and suggestion is welcomed by authors.

20 Oral Drugs in Optometry — A Practitioner's Reference



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Augmentin

Amoxicillin/Clavulanate potassium 250, 500 mg tabs

Class: Antibacterial, penicillin Use: Bacterial infections, incl. hordeolum, preseptal cellulitis, dacryocystitis, prophylaxis

Dosage: 500 mg q8h x 7-10d CI: Cholestatic jaundice, mononucleosis, hypersensitivity to drug, Caution in hepatic, renal impairment

SE: Anaphylactic reaction, diarrhea, N/V rash, urticaria

Mechanism: Inhibits bacterial cell wall synthesis; clavulanate is a beta-lactamase inhibitor

Azithromycin

250, 500 mg tabs

CI: Known hypersensitivity to erythromycin,

Class: Antibiotic, macrolide Use: Inclusion conjunctivitis, hordeolum Dosage: (Inclusion conj.): 1000 mg single dose; (Hordeolum): 250mg bid x 1d, then qd x 4d

any macrolide or ketolide antibiotic SE: N&V, diarrhea, abdominal pain

Notes: Caution in patients with impaired hepatic function; azithromycin may exacerbate myasthenia gravis. Patients should not take Al or Mg-containing antacids concurrently with azithromycin. May enhance effects of oral anticoagulants; use caution in patients on digoxin, ergotamine or dihydroergotamine, terfenadine, cyclosporine, hexobarbital and phenytoin, as possible drug interactions have been observed but not studied.

Dicloxacillin

250, 500 mg tabs

Class: Antibiotic, penicillin

Use: Preseptal cellulitis, acute phase dacryocystitis and canaliculitis, internal hordeolum, prophylaxis

Dosage: 250 mg qid x 7-10d, or 500 mg bid x

CI: penicillin allergy SE: GI upset

Notes: Dicloxacillin is a penicillinase-

resistant penicillin with a good safety profile. It is very inexpensive, with a 10-day course costing less than \$10.

Doxycycline

20, 50, 100 mg tabs or capsules

Class: Antibiotic, tetracycline

Use: MGD, recurrent hordeola, rosacea, dry eye rolide **Dosage**: (MGD): 20-100 mg bid x 1 mo or longer if warranted. If MGD secondary to rosacea, extend to 6 weeks followed by 1-3 mo taper or maintain on 40-50 mg qd dose indefinitely; (Dry Eye): 50 mg qd x several mo as warranted; (RCE): 50 mg bid x 2 mo along with diomyopathy, bradycardia topical steroid gtts tid x 2-3 wks

CI: Children <8 yo, pregnant or lactating

SE: Photosensitivity, GI upset, diarrhea Notes: Take on empty stomach, avoid dairy products. Avoid sun exposure, as tetracyclines will increase risk and severity of burns. Longer- toin and carbamazepine. Safe in children and acting and improved safety profile versus tetra-

Mechanism: Decreases lipase prod. of Staph. epidermidis to allow stabilization of tear film. Anti-inflammatory activity via IL-1 suppression. Inhibits MMP-9, an enzyme responsible for damage to corneal epithelial basement membrane.

Erythromycin

250mg, 500mg tabs, suspension

Class: Antibiotic, anti-inflammatory, mac-

Use: Inclusion conjunctivitis, MGD Dosage: (Inclusion conj.): 500 mg qid x 3wks; (MGD): 500mg bid x 1-3 mo CI: Hypersensitivity to macrolides; caution myasthenia gravis, hepatic impaitment, car-

SE: Diarrhea, hepatic impairment, QT prolongation, anaphylaxis, pancreatitis

Notes: Use for meibomianitis is second-line if tetracyclines are contraindicated; interacts with many drugs, incl. antihistamines, theophylline, digoxin, warfarin, lovastatin, phenypregnant women.

Mechanism: Inhibits bacterial protein synthesis by binding 50s subunit.

Ibuprofen

200, 400, 600, 800 mg tabs;

200 mg chewable tabs; 200 mg caps

receptors via COX inhibition, resulting in re-

FB, trauma, post-surgical procedures, herpes

Class: Non-narcotic analgesic, NSAID

Tetracycline 250, 500 mg capsule

Dosage: (MGD): 250 mg qid x 1 mo or longer

if warranted. If MGD secondary to rosacea.

extend to 6 weeks followed by 1-3 mo taper

or maintain on 250 mg qd dose indefinitely.

CI: Children <8 yo, pregnant or lactating

SE: Photosensitivity, GI upset, diarrhea

women, renal insufficiency – consider use o

Interactions: Depresses prothrombin activity

interfere with antibacterial effects of penicil-

Notes: Take on empty stomach, avoid dairy

Mechanism: Decreases lipase prod. of Staph.

epidermidis to allow stabilization of tear film.

Anti-inflammatory activity via IL-1 suppres-

for damage to corneal epithelial basement

Class: Antibiotic, tetracycline

doxycycline or dose adjustment

lins. Antacids impair absorption.

est-acting of the tetracyclines

Use: MGD, recurrent hordeola, rosacea

Acyclovir

400, 800 mg tabs; 200 mg caps; suspension

Class: Antiviral

Use: Herpes simplex infections, incl. keratitis and post-herpetic neuralgia; Herpes zoster infections.

Dosage: (H. simplex): Adults: 400 mg 5x/ day x 7-10d for acute episode, 400 mg bid x 1yr for prevention of recurrence; Children <12yo: 20 mg/kg q6h x 7-10d; (H. zoster): 800 mg 5x/d x 7-10d CI: Renal insufficiency – dosages may be

use caution in patients on anticoagulants. May adjusted if needed

in recurrent disease.

SE: GI upset, headache, skin rash

Notes: Most effective when used within 72 h of onset of symptoms. May be substituted products. Avoid sun exposure, as tetracyclines | with valacyclovir at 1000 mg tid dose. will increase risk and severity of burns. Short- | Shown to help prevent additional episodes |

> Mechanism: Guanosine analog interrupts viral DNA synthesis via viral DNA poly-

sion. Inhibits MMP-9, an enxyme responsible **Pregnancy**: Category B – secreted in breast milk

Prednisone

1, 2.5, 5, 10, 20, 50 mg tabs

Class: Anti-inflammatory, Steroid

Use: Contact dermatitis, temporal arteri-

tis, Bell's palsy

fluid retention

G6PD deficiency.

Dose: 60 mg qd x 3-4 days CI: Active peptic ulcer; precaution in PUD, TB, active infection, pregnancy, and psychosis

SE: Increased IOP, cataract, Cushing's, hyperglycemia, hypokalemia, hypertension, peptic ulcer, pseudotumor cerebri, osteoporosis, decreased wound healing,

Acetazolamide

Pregnancy: Category B

125, 250, 500 mg Class: Anti-glaucoma agent, carbonic anhy-

Diamox

drase inhibitor Use: Acute angle closure, reduction of IOP when other methods are ineffective Dosage: (Acute angle closure): 500 mg PO; (chronic glaucoma): 250 mg q6h CI: Hypokalemia, hyponatremia, acidosis, cir-

rhosis; caution in diabetes, gout, and sulfonamide allergy SE: Fatigue, change in taste, N/V, diarrhea,

transient myopia, photosensitivity Notes: Reduces IOP by 30-40% Mechanism: Inhibits carbonic anhydrase and production of aqueous.

Guaimax-D

1200 mg guaifenesin/120 mg pseudoephedrine tabs

Class: Expectorant, decongestant Use: relief of congestion due to viral URI and

conjunctivitis Dosage: 1 tab bid x 10d

CI: Severe hypertension, coronary artery disease, MAOI use within 14 d; caution in patients with hypertension (meds will be antagonized), diabetes, cardiovascular disease, narrow angle glaucoma, elderly, prostatic hypertrophy, and hyperthyroid.

SE: Nervousness, insomnia, headache, GI upset, urinary retention

Notes: Taken at breakfast and dinnertime; avoid hs due to insomnia.

Tylenol

Acetaminophen 325 mg tabs

Class: Non-narcotic analgesic Use: Mild-moderate ocular pain not well man-

aged by topical drugs; corneal abrasion, PRK, FB, trauma, post-surgical procedures, herpes zoster neuralgia

Dosage: 500-1000mg q4-6h as needed CI: Chronic alcohol abuse, hepatic impairment, G6PD deficiency

SE: Liver toxicity and hematologic effects at high dosages, nausea, rash Mechanism: Poorly understood

Dosage: 200-400 mg q4h as needed CI: Known allergic reaction to NSAIDs, severely compromised cardiovascular or renal

duction of prostaglandins

zoster neuralgia

SE: GI disturbance, prolonged bleeding time, renal function disruption, headache Notes: Monitor closely in patients with diminished renal function; elderly patients are more susceptible to serious GI bleeding.

Pregnancy: Category C prior to 30 wks gestation, D at or after 30 wks gestation; not recommended in lactating women.

Lortab

Hydrocodone bitartrate/Acetaminophen 2.5/500, 5/500, 7.5/500, 10/500 mg tabs

Class: Narcotic/non-narcotic combination an- | Class: Narcotic/non-narcotic combination Mechanism: prevent firing of peripheral pain algesic

Use: Moderate-severe pain

membrane

Dosage: 1-2 tabs q4-6h prn

Use: Mild-moderate ocular pain not well man- | SE: Respiratory depression, hepatotoxicity, aged by topical drugs; corneal abrasion, PRK, | dependency, agranulocytosis, thrombocytopenia, lightheadedness, dizziness, drowsiness, rash, itching

> CI: Caution in hepatic or renal impairment, hypothyroid, G6PD deficiency, concurrent use | ziness, abdominal pain, vomiting, rash. of depressants

Notes: Use caution in patients with recent alcohol consumption.

Tylenol 3 Acetaminophen/Codeine

300/30 mg tabs

analgesic Use: Moderate-severe pain

Dosage: 1-2 tab q4-6h

Notes: Take with meals.

CI: Respiratory depression; caution in G6PD deficiency, seizures, hypothyroid, alcohol abuse, hepatic and renal impairment. SE: Respiratory depression, CNS depression, hepatotoxicity, light-headedness, diz-

Vicodin

Acetaminophen/Hydrocodone 500/5 mg tabs

analgesic

Use: Moderate to severe pain Dosage: 1-2 tab q4-6h prn CI: Caution in hepatic or renal impair-

SE: Respiratory depression, hepatotoxic- Notes: Do not take with fruit juice 'ity, dependency, agranulocytosis, thrombocytopenia, lightheadedness, dizziness, drowsiness, rash, itching.

Allegra

Fexofenadine 30, 60, 180 mg tabs

Class: Narcotic/non-narcotic combination | Class: Anti-allergy, 2nd-generation antihista-

Use: Seasonal allergic rhinitis Dosage: 180 mg qd or 60mg bid SE: HA, dyspepsia, fever, cough, myalgia ment, chronic alcohol abuse, hypothyroid, | CI: Hypersensitivity; caution in renal impairment or PKU

Class: Anti-allergy, antihistamine

syncope, hypotension, drowsiness, fatigue, di- qd

Zyrtec

Cetirizine



10 mg tabs

Use: Seasonal allergic rhinitis Dosage: 1 tab/cap qd prn SE: bronchospasm, hypersensitivity rxn, cholestasis, seizures, anemia, thrombocytopenia,

CI: Hypersensitivity to hydroxyzine; caution lowing of skin in use of CNS depressants, hepatic or renal impairment.

AREDS

OTC tabs, capsules



Class: Vitamin Supplement Use: Prevention of advanced or exudative

forms of AMD

Dosage: 500 mg vitamin C, 400 IU vitamin E, 15 mg beta-carotene, 80 mg zinc, 2 mg copper

SE: GI upset, genitourinary complications, yel-

tients taking multiple medications; avoid betacarotene in smokers or former smokers. Notes: AREDS formulation is shown to benefit only those with intermediate AMD in one or

both eyes, or advanced AMD in one eye only.

CI: Use caution in chronic disease and in pa-

L-lysine

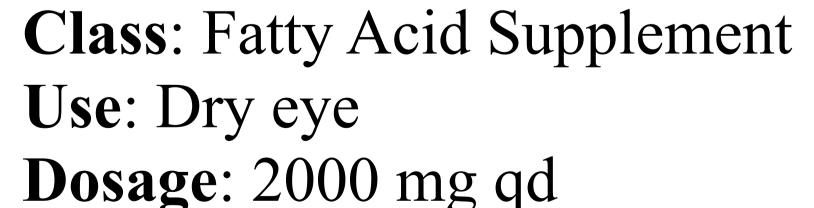
OTC 250, 500, 1000 mg tabs or capsules

Class: Amino Acid Supplement Use: Herpes simplex keratitis Dosage: 3000-9000 mg qd for active infection; 1250 mg qd for prevention of recurrence CI: Use caution in patients on antibiotics – in very high (10-30 g) doses, lysine may increase toxicity of aminoglycosides SE: GI upset may occur in very high doses

Mechanism: Interferes with viral replication.

Notes: Do not take with milk.

Omega-3 Fatty Acids OTC tabs, capsules in various doses



CI: If derived from fish oil, use caution in diabetics (may alter control of blood sugar) and patients on anticoagulants (may enhance

effect) SE: GI upset

Notes: Very slow onset therapy — may take 3-4 months of supplementation before effect is noticed. Avoid omega-3s derived from fish liver, as these include vitamins A and D which may have additional side effects in higher

Mechanism: decreases inflammation, enhances tear production, thins meibomian secretions

Notes:

			_

concentrations

References

- . www.drugs.com
- 2. www.rxlist.com