

Management of Acute Conjunctivitis

Acute conjunctivitis (bacterial, viral, and allergic) or “red-eye” is the most common ophthalmologic complaint in primary care and is often self-limiting or easily treatable. Clinical trial data has demonstrated that acute bacterial conjunctivitis usually resolves within 10-14 days even without treatment and serious complications occur very infrequently regardless of treatment. However, bacterial eradication with broad-spectrum antibiotics has been advocated on the grounds they hasten recovery and may prevent relapse and/or person-to-person spread.^{i,ii}

Several topical antibacterial ointment and drop formulations are currently available; while most are relatively inexpensive (~\$10), the newer generation fluoroquinolones (Vigamox, Zymar) may cost in excess of \$60 for a 3-5mL bottle.

Key Points

- ◆ When diagnosing acute conjunctivitis, more serious eye conditions (iritis, keratitis, corneal ulcers, and angle closure glaucoma) should be ruled out (see Table 1).
- ◆ Microbiologic cultures for common conjunctivitis are generally not indicated to differentiate bacterial from viral or allergic etiology; diagnosis is presumed based on clinical features (see Table 2).
- ◆ Acute bacterial conjunctivitis is often self-limiting; broad spectrum ophthalmic antibiotics may improve rate of recovery and prevent spread (see Table 3).
- ◆ Ophthalmic fluoroquinolones should not be used as first-line treatment for bacterial conjunctivitis due to cost, concern for resistance, and availability of other effective, well-tolerated, less expensive agents.
- ◆ Fourth-generation fluoroquinolones, gatifloxacin (Zymar) and moxifloxacin (Vigamox), have an established place in therapy for sight-threatening conditions including keratitis, endophthalmitis, and for surgery prophylaxis.
- ◆ Idaho Medicaid has selected Vigamox as the preferred fourth-generation fluoroquinolone; all other fluoroquinolones are non-preferred.
- ◆ Ophthalmic corticosteroids should only be used under the direction of an ophthalmologist.

Table 1: “Red-Eye” Warning Signsⁱⁱⁱ

Warning Signs for Serious “Red-Eye” Conditions Requiring Management by an Ophthalmologist
Reduction of visual acuity
Ciliary flush*
Photophobia
Severe foreign body sensation that prevents keeping the eye open
Corneal opacity
Fixed pupil
Severe headache with nausea

*pattern of injection where redness is most pronounced in a ring at the limbus

*Idaho Drug Utilization Review Program
Educational Leaflet for Physicians, Pharmacists and other Healthcare Practitioners*

Table 2: Acute Conjunctivitis^{iii,iv}

Types	Common Etiology	Clinical Features	Drug Treatment
Bacterial	<i>Haemophilus influenzae</i> <i>Streptococcus pneumonia</i> <i>Staphylococcus aureus</i>	Redness Eye “stuck-shut” in morning Often unilateral Mucopurulent discharge throughout the day Spontaneous, continuous discharge at lid margin and corners	Ophthalmic antibiotic
Viral	<i>Adenovirus</i>	Redness Eye “stuck-shut” in morning Often bilateral Mucoserous discharge Burning, gritty feeling Viral prodrome	Ophthalmic OTC antihistamine/decongestant
Allergic	Airborne allergens	Redness Eye “stuck-shut” in morning Usually bilateral Mucoserous discharge Itching Hx of atopy or seasonal/specific allergy Recent allergen exposure	Ophthalmic OTC antihistamine/decongestant Ophthalmic mast cell stabilizer/antihistamine Ophthalmic NSAID Ophthalmic steroid

Table 3: Commonly Used Ophthalmic Antibiotics^{iv,v,vi}

Antibacterial Agent	Preparations	Cost*	Comments
First-line Agents			
Polymyxin B/trimethoprim	Polytrim	\$13.99	
Bacitracin/polymyxin B	Polysporin	\$9.99	Ointment only
Sulfacetamide	Sulf-10, Bleph-10, Sulamyd, Isopto-Cetamide, AK-Sulf	\$7.99	<i>S. aureus</i> resistance increasing
Erythromycin	Ilotycin, AK-Mycin	\$7.99	Ointment only
Alternatives			
Bacitracin	AK-Tracin	\$7.99	Ointment only
Neomycin/polymyxin B/bacitracin	Neosporin	\$7.99	High rate of allergic reaction to neomycin, ointment only
Aminoglycosides	Garamycin, Genoptic, Tobrex	\$7.99-\$9.99	Corneal damage with several days use
Fluoroquinolones	Ciloxan, Iquix, Ocuflax, Quixin, Vigamox, Zymar	\$45.03-\$68.58	Expensive, concern for emerging resistance

*Approximate cost of one treatment course with generic agent (if available) www.drugstore.com (5/2007)

ⁱ Schiebel NE. Use of antibiotics in patients w/ acute bacterial conjunctivitis. *Ann Emerg Med.* 2003;41:407-9.

ⁱⁱ Sheikh A, Hurwitz B. Antibiotics versus placebo for acute bacterial conjunctivitis. *Cochrane Database Syst Rev.* 2006 Apr 19;(2):CD001211.

ⁱⁱⁱ Jacobs, DS. Conjunctivitis. *UpToDate Online*, Waltham, MA: UpToDate Inc.; 2006; October 17,2006.

^{iv} American Optometric Association. Care of the patient with conjunctivitis. 2nd ed. St. Louis (MO): American Optometric Association; 2002 Nov 8. 55 p. Accessed online October 17, 2006, at: <http://www.aoa.org/documents/CPG-11.pdf>

^v Zymar and Vigamox for Bacterial Conjunctivitis. *Pharmacist’s Letter/Prescriber’s Letter* 2003;19(5):190514.

^{vi} Prochazka AV. Diagnosis and treatment of red eye. *Primary Care Case Reviews.* 2001;4:23-31.