



Clinical Practice Guidelines

Outpatient Acute Infectious Conjunctivitis

Viral and bacterial conjunctivitis may have similar presentations and can be difficult to distinguish. Accurate diagnosis and treatment is necessary to provide the patient with the best possible care. The inclusion criteria is birth through 18 years old. The following Clinical Practice Guideline (CPG) was developed by the Rainbow Care Connection (RCC) committee, reviewed by RBC antimicrobial stewardship program and approved by the Quality Care Network Board. The goal of this guideline is to provide a care path to improve quality patient care outcomes.

What to know about Infectious Conjunctivitis

- **Common infectious pathogens:** *S. pneumoniae*, non-typeable *H. influenzae*, *Moraxella* spp, *Staph* spp, and viruses (especially adenovirus)
- **Signs and symptoms.** Hyperemia (red eye), tearing, “watery” to purulent discharge, papillary and/or follicular reaction, chemosis (conjunctival edema), subconjunctival hemorrhage, and membrane or pseudomembrane formation in the conjunctiva

Bacterial vs Viral Etiology	
Suggest bacterial etiology	Suggest viral etiology
<ul style="list-style-type: none"> • Bilateral • Purulent discharge (yellow-green) • Erythema is common in older children but less common in younger children • Concomitant acute otitis media 	<ul style="list-style-type: none"> • Unilateral (at least initially) • Water discharge (clear to white-yellow) • Erythema • Concomitant viral upper respiratory tract symptoms • Preauricular lymphadenopathy

Bacterial conjunctival culture is generally unnecessary but can be considered in severe or refractory cases.

Special considerations

- **Ophthalmia Neonatorum is conjunctivitis** that develops in the first 4 weeks of life and the most common infectious causes are *S. aureus*, *S. epidermidis*, *S. pneumoniae* and *M. catarrhalis*. While *C. trachomatis* and *N. gonorrhoeae* are rare causes of ophthalmia neonatorum they're associated with high morbidity and are important to recognize and treat.
 - **Chlamydial conjunctivitis** typically develops 5-14 days after birth and often progresses from watery to purulent discharge with papillary conjunctivitis. Chlamydia conjunctivitis is often associated with other sites of infection, such as lung, nasopharynx and genital tract. Neonates with chlamydia conjunctivitis should be treated with oral erythromycin or azithromycin.
 - **Gonococcal conjunctivitis** often presents in the first 1-5 days of life, but can present up to 3

weeks of age. Neonatal gonococcal conjunctivitis usually presents with severe copious purulent discharge, severe conjunctival injection, chemosis, and eyelid swelling. *N. gonorrhoeae* conjunctivitis requires admission for parenteral therapy with ceftriaxone.

- **Herpes Simplex virus (HSV) conjunctivitis** usually presents with conjunctivitis with concomitant facial herpetic skin lesions. Any patient with suspected HSV conjunctivitis should be immediately referred to an ophthalmologist for further evaluation and treatment, often with oral and topical antivirals. Recurrences of HSV conjunctivitis are common, so any patient with recurrent HSV conjunctivitis should be re-referred to ophthalmology with any further episodes of conjunctivitis, and also referred to infectious diseases for antiviral prophylaxis.
- ***N. gonorrhoeae* conjunctivitis** usually presents with severe copious purulent discharge, severe conjunctival injection, chemosis, eyelid swelling, decreased vision and preauricular lymphadenopathy. *N. gonorrhoeae* can quickly cause permanent eye damage (over 24-48 hours) so rapid diagnosis and treatment is needed. Patients with suspected or confirmed *N. gonorrhoeae* conjunctivitis should be admitted for parenteral ceftriaxone.
- **Contact lens wearers.** Patients who wear contact lenses are at significantly increased risk for bacterial, viral and fungal keratitis. Any patient with conjunctivitis who wears contact lenses should be asked to remove their contact lenses and started on antibiotic eye drops. Consider referral to an ophthalmologist.

Referral to Ophthalmology:

- Refer immediately for conjunctivitis associated with vision loss/constant blurred vision, moderate or severe pain, photophobia, severe purulent discharge, concern for gonococcal conjunctivitis or HSV conjunctivitis, and in a patient with a history of HSV conjunctivitis
- Consider referral for contact lens wearers, and infections that occur after trauma (finger nail, tree branch, etc.)
- Non-emergent referral is appropriate for patients who fail therapy (no improvement after 1 week of treatment), or have recurrent conjunctivitis

Treatment

The AAP does not recommend exclusion from school or daycare for conjunctivitis in a child who is afebrile and is acting normally, although schools or daycares may have their own rules which limit attendance. If adenoviral conjunctivitis is suspected, the patient should be kept home to prevent spread to other children.

Viral conjunctivitis (non-herpetic)	Viral conjunctivitis can be treated with supportive care, including cool compresses, preservative-free artificial tears, and topical antihistamines. Antibiotic treatment is not indicated. Viral conjunctivitis is very contagious and patients should try to avoid touching their eyes and should wash hands frequently with soap and water to try to prevent spread. Viral conjunctivitis often worsens for 4-7 days before improving and can take more than 2 weeks to fully resolve.
Acute bacterial conjunctivitis (nongonococcal)	Acute bacterial conjunctivitis is usually self-limited (most cases resolve in 1-2 weeks without treatment) but antibiotics can be used to reduce the duration and the spread. Because all broad spectrum topical antibiotics are usually effective for nongonococcal bacterial conjunctivitis the choice of antibiotic should be made based on cost and availability.

Antibiotics for Acute Bacterial Conjunctivitis
Treat with 1-2 drops in each eye 4 times per day for 7 days

Polymyxin B/trimethoprim ophthalmic drops

OR

Aminoglycoside (e.g., Gentamicin or Tobramycin) ophthalmic drops

OR

Fluoroquinolone (e.g., Ciprofloxacin or Ofloxacin) ophthalmic drops

Moxifloxacin (Vigamox) should be reserved for use by ophthalmology

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