

# Care of the Patient with Conjunctivitis



American Optometric Association

## A. DESCRIPTION AND CLASSIFICATION

Conjunctivitis is an inflammation of the conjunctiva caused by a wide range of conditions and is characterized by conjunctival hyperemia and ocular discharge. It is classified clinically according to the underlying cause (See Table 1).

## B. RISK FACTORS

The specific risk factors for conjunctivitis are ill defined and related to the etiology. Primary infectious conjunctivitis may occur as a result of exposure to pathogens by:

- Direct hand-to-eye contact
- Sexual transmission
- Airborne contact
- Contaminated ophthalmic instruments

## C. COMMON SIGNS, SYMPTOMS, AND COMPLICATIONS

Signs and symptoms of the most common types of conjunctivitis are summarized in Table 2.

Complications associated with conjunctivitis are related to its etiology (e.g., acute forms of bacterial conjunctivitis may lead to symblepharon and conjunctival scarring; hyperacute forms of bacterial conjunctivitis may develop bacterial keratitis; and toxic, irritative forms may become chronic).

## D. EARLY DETECTION AND PREVENTION

Most cases of infection-associated conjunctivitis are sporadic or related to epidemic outbreaks.

Preventing the spread of infectious conjunctivitis

involves caution on the part of both the patient (follow good hygiene practices and limit direct personal contact with infected persons) and the practitioner (implement adequate infection control procedures and educate patient).

## E. EVALUATION

The evaluation of a patient with signs and symptoms suggestive of conjunctivitis may include, but is not limited to, the following areas:

### 1. Patient History

- Chief complaint
  - Symptoms (itching, burning, discharge, pain, foreign body sensation, photophobia)
  - Onset and course (acute vs. chronic, progressive vs. stationary)
  - Unilateral or bilateral
  - Characteristics of discharge (purulent, mucous, serous)
- Ocular history
  - Previous episodes
  - Prior exposure to infected individuals
  - Trauma
  - Contact lens wear
  - Use of topical legend or over-the-counter medications or cosmetics
- General health history
  - Recent upper respiratory infections
  - Autoimmune disorders
  - Dermatologic conditions
  - Sexually transmitted diseases

NOTE: This Quick Reference Guide should be used in conjunction with the Optometric Clinical Practice Guideline on Care of the Patient with Conjunctivitis (2<sup>nd</sup> edition November 2002). It provides summary information and is not intended to stand alone in assisting the clinician in making patient care decisions.

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**TABLE 1**

**Clinical Classification of Conjunctivitis**

	<b>Classification</b>	<b>Underlying Cause</b>	<b>Descriptions</b>
<b>Allergic</b>	<input type="checkbox"/> Atopic Keratoconjunctivitis	Atopy	Severe, chronic external ocular inflammation appearing late in teenage years, lasting 4-5 decades
	<input type="checkbox"/> Simple Allergic Conjunctivitis	Exposure to a wide variety of allergens	Often results from exposure to eye medications or contact lens solutions or their preservatives
	<input type="checkbox"/> Seasonal Conjunctivitis	Seasonal exposure to ragweed, pollens, dander, dust, or mold spores	Recurrent, usually transient and self-limiting condition
	<input type="checkbox"/> Vernal Conjunctivitis	Allergic reaction more common in dry, warm climates; seasonal in temperate climates	Severe conjunctival inflammation, possibly associated with corneal complications, usually affecting males under age 20 and on average lasting 4 years
	<input type="checkbox"/> Giant Papillary Conjunctivitis	Contact lenses, ocular prostheses, or exposed sutures in contact with conjunctiva	Usually associated with soft contact lens wear
<b>Bacterial</b>	<input type="checkbox"/> Hyperacute Bacterial Conjunctivitis	<i>Neisseria gonorrhoeae</i> ; less commonly <i>Neisseria meningitidis</i> , <i>Staphylococcus aureus</i> , the <i>Streptococcus</i> and <i>Haemophilus</i> species, and <i>Pseudomonas aeruginosa</i>	Most commonly acquired through autoinoculation from infected genitalia
	<input type="checkbox"/> Acute Bacterial Conjunctivitis	Primary microbial agents are <i>S. aureus</i> , <i>Streptococcus pneumoniae</i> , and <i>Haemophilus</i>	Self-limited, generally lasting less than 3 weeks
	<input type="checkbox"/> Chronic Bacterial Conjunctivitis	Continued inoculation from bacteria associated with blepharitis, most commonly <i>S. aureus</i>	Bacterial conjunctivitis lasting longer than 4 weeks
<b>Viral</b>	<input type="checkbox"/> Adenoviral Conjunctivitis	Many of the 47 different serotypes of adenovirus may be the causative agents	Highly contagious, appears most commonly as epidemic keratoconjunctivitis in adults ages and as 20-40 years and as pharyngeal conjunctival fever in children
	<input type="checkbox"/> Herpetic Conjunctivitis	Infectious agents may be the herpes simplex ( <i>Herpesvirus hominis</i> ), varicella-zoster ( <i>Herpesvirus varicellae</i> ), or Epstein-Barr	Infection with herpes simplex virus can result in acute conjunctivitis; herpes zoster results in a recurrent virusinfection in middle-age and older persons
<b>Chlamydial</b>	<input type="checkbox"/> Chlamydial Conjunctivitis	<i>Chlamydial trachomatis</i>	Ocular infections may result in adult inclusion conjunctivitis, ophthalmia neonatorum, trachoma, and lymphogranuloma venereum
<b>Other Forms</b>	<input type="checkbox"/> Contact Lens-Related Conjunctivitis	May be related to contact lens solution allergy, tissue hypoxia, or giant papillary conjunctivitis (GPC)	Noninfectious conjunctivitis complicated by contact lens wear can be acute or chronic, allergic or nonallergic in origin
	<input type="checkbox"/> Mechanical Conjunctivitis	Entropion, trichiasis, or misdirected lashes, sutures, foreign bodies, and conjunctival concretions	Mechanical irritation produces a noninfectious secondary conjunctivitis
	<input type="checkbox"/> Traumatic Conjunctivitis	Either direct injury (abrasions, lacerations, or epithelial defects) or indirect trauma (chemical injury)	Trauma may produce clinical manifestations of a noninfectious secondary conjunctivitis
	<input type="checkbox"/> Toxic Conjunctivitis	Administration of drugs or exposure to noxious chemicals; molluscum contagiosum lesions of the periorbital skin	Results in a secondary toxic follicular conjunctivitis
	<input type="checkbox"/> Neonatal Conjunctivitis (Ophthalmia neonatorum)	Common etiologic agents are chemical, chlamydial, bacterial ( <u>N. gonorrhoeae</u> ), and herpetic	Conjunctivitis occurring within the first month of life
	<input type="checkbox"/> Parinaud's Oculoglandular Syndrome	Wide range of infectious agents, with Cat-scratch	Granulomatous conjunctivitis disease being the most common cause
	<input type="checkbox"/> Phlyctenular Conjunctivitis	Introduction of foreign proteins commonly associated with staphylococcal infections	A delayed hypersensitivity reaction
	<input type="checkbox"/> Secondary Conjunctivitis	Related to a variety of ocular and systemic disorders	Noninfectious conjunctivitis produced by another underlying condition

- Social history
  - Environmental exposure
  - Sexual history (as indicated)
- Family ocular and medical history

## 2. Ocular Examination

- Visual acuity
- External examination of eye and adnexa
- Biomicroscopic evaluation of anterior segment
- Neuro-ophthalmic screening (pupillary responses, confrontation visual fields, ocular motility)
- Tonometry
- Fundus examination

## 3. Supplemental Testing

- Cultures, smears, and scrapings
- Immunoassay for identification of chlamydial conjunctivitis
- Conjunctival biopsy in atypical conjunctivitis

## F. MANAGEMENT

Table 3 provides an overview of the evaluation and management of patients with conjunctivitis.

### I. Basis for Treatment

Treatment of conjunctivitis is directed toward three goals:

- Increasing patient comfort
- Reducing course of infection
- Helping prevent spread of infection

## 2. Available Treatment Options

- Pharmacologic agents
  - Topical (e.g., antibiotics, antimicrobials, steroids, antibiotic/steroid combinations, vasoconstrictor/antihistamines, antihistamines, nonsteroidal anti-inflammatory drugs, mast-cell stabilizers)
  - Systemic (e.g., antihistamines, antibiotics, antivirals)
- Supportive therapy (e.g., cold compresses, lubricants, ocular decongestants, saline lavage, discontinuing contact lens wear, removal of offending agent, pressure patching)

## 3. Patient Education

Thorough patient education concerning proper hygiene may help relieve the patient's anxiety about the condition, increase patient compliance with therapy, and prevent the spread of infection.

## 4. Prognosis and Followup

Followup care varies with the diversity of etiologies. It should be provided at appropriate intervals to help ensure compliance and continued effectiveness. Alteration of therapy, when needed, recognition of therapeutic side effects, and re-evaluation of the condition and its response to treatment are integral to the management of each patient.

**TABLE 2\***

## Signs and Symptoms of Common Types of Conjunctivitis

Etiology	Condition	Onset/Duration	Symptoms	Conjunctival Response	Preauricular Lymphadenopathy	Discharge
Allergic	Seasonal	Seasonal/recurrent	Itching, tearing	Mild hyperemia, mixed papillae/follicles	Unusual	Mucoid
	Vernal	Seasonal/chronic	Itching, mucous discharge	Giant papilla	Unusual	Ropey mucoid
	Giant papillary	Acute/chronic	Itching, contact lens intolerance, mucous discharge	Giant papilla	Unusual	Mucoid
Bacterial	Hyperacute bacterial	Acute	Purulent discharge, may have pain	Intense diffuse hyperemia, papillae	Occasional	Copious purulent
	Acute bacterial	Acute	Tearing, lid crusting	Moderate diffuse hyperemia, papillae	Unusual	Purulent-mucopurulent
	Chronic bacterial	Chronic	Lid crusting, foreign body sensation	Low grade hyperemia, mixed follicles/papillae	Unusual	Mucopurulent
Viral	Adenoviral	Acute	Tearing, lid crusting upon awakening	Diffuse hyperemia, petechial hemorrhages, follicles	Common	Serous, serous-mucoid, or mucopurulent
	Herpetic	Acute	Tearing	Diffuse hyperemia, follicles	Occasional	Serous-mucoid
Chlamydial	Chlamydial	Acute/chronic	Tearing	Diffuse hyperemia, follicles predominate	Occasional	Mucoid

\*Adapted from Table 1 in the Optometric Clinical Practice Guideline on Care of the Patient with Conjunctivitis.

**TABLE 3\***

**Frequency and Composition of Evaluation and Management Visits for Conjunctivitis**

Type of Patient	Frequency of Evaluation	Composition of Followup Evaluations				Management Plan
		History	Visual Acuity	Slit Lamp Biomicroscopy	Ophthalmoscopy	
Allergic Conjunctivitis	Mild—every 5-7 days Moderate—every 3-5 days Severe—every 1-3 days	Yes	Yes	Yes	As indicated	Identify/remove allergen  Use of nonpreserved lubricants, cold compresses, topical pharmaceuticals, systemic antihistamines  Educate patient
Bacterial Conjunctivitis	Mild—every 5-7 days Moderate—every 3-5 days Severe—every 1-3 days	Yes	Yes	Yes	As indicated	Identify organism and specific antimicrobial agent  Hyperacute form: obtain smears and cultures, do saline lavage  Use of topical and/or systemic antibiotics  Refer for evaluation and treatment of underlying systemic condition  Educate patient
Viral Conjunctivitis	Mild—every 5-7 days Moderate—every 3-5 days Severe—every 1-3 days	Yes	Yes	Yes	As indicated	Use of cold compresses, lubricants, ocular decongestants  Herpes simplex: use of antiviral agent  Herpes zoster: use of topical antibiotic/steroid combinations  Educate patient
Chlamydial Conjunctivitis	Mild—every 5-7 days Moderate—every 3-5 days Severe—every 1-3 days	Yes	Yes	Yes	As indicated	Use of systemic antibiotics  Refer for evaluation and treatment of underlying systemic condition  Educate patient

\* Adapted from Figure 3 in the Optometric Clinical Practice Guideline on Care of the Patient with Conjunctivitis.