TABLE 2 NATURAL HISTORY OF CONJUNCTIVITIS

Type of Conjunctivitis	Natural History	Potential Sequelae
Allergic		
Seasonal	Recurrent	Minimal, local
Vernal	Onset in childhood; chronic course with acute exacerbations during spring and summer. Gradual decrease in activity within 2 to 30 years.	Eyelid thickening; ptosis; conjunctival scarring; corneal neovascularization, thinning, ulceration, infection; visual loss; keratoconus
Atopic	Onset in childhood; chronic course with acute exacerbations	Eyelid thickening or tightening, loss of lashes; conjunctival scarring; corneal scarring, neovascularization, thinning, keratoconus, infection, ulceration; cataract; visual loss
Giant papillary conjunctivitis (GPC)	Chronic gradual increase in symptoms and signs with contact lens wear, exposed corneal or scleral sutures, ocular prosthesis	Ptosis
Mechanical/Irritative/Toxic		
Superior limbic keratoconjunctivitis (SLK)	Subacute onset of symptoms, usually bilateral. May wax and wane for years.	Superior conjunctival keratinization, pannus, filamentary keratitis
Contact-lens-related keratoconjunctivitis	Subacute to acute onset of symptoms. May take months or longer to resolve with treatment and withdrawal of contact lenses.	Superior epitheliopathy and corneal scarring; limbal stem cell deficiency; may progress centrally into the pupillary area
Floppy eyelid syndrome	Chronic ocular irritation due to nocturnal eyelid ectropion causing upper-tarsal conjunctiva to come in contact with bedding	Punctate epithelial keratitis; corneal neovascularization, ulceration, and scarring; keratoconus
Giant fornix syndrome	Chronic mucopurulent conjunctivitis, which waxes and wanes with typical short courses of topical antibiotic therapy	Elderly women, ptosis, superior hyperemia, chronic conjunctivitis, large superior fornix with coagulum of mucopurulent material
Pediculosis palpebrarum *(Phthirus pubis)*	Blepharitis and conjunctivitis persist until treated	Chronic blepharitis, conjunctivitis, and, rarely, marginal keratitis
Medication-induced keratoconjunctivitis	Gradual worsening with continued use	Corneal epithelial erosion, persistent epithelial defect, corneal ulceration, pannus, corneal and conjunctival scarring
Conjunctival chalasis[17]	Chronic irritation; dry eye	Redundant conjunctiva
Viral		
Adenoviral	Self-limited, with improvement of symptoms and signs within 5–14 days	Mild cases: none. Severe cases: conjunctival scarring, symblepharon, and subepithelial corneal infiltrates
Herpes simplex virus (HSV)	Usually subsides without treatment within 4–7 days unless complications occur	Epithelial keratitis, stromal keratitis, neovascularization, scarring, thinning, perforation, uveitis, trabeculitis
Varicella (herpes) zoster (VZV)	Primary infection (chicken pox), as well as conjunctivitis from recurrent infection, usually subsides in a few days. Vesicles can form at the limbus, especially in primary infection. The conjunctivitis is generally papillary in nature.	Necrosis and scarring from vesicles on the eyelid margins, conjunctiva, and in the corneal stroma in primary disease in children. Conjunctival scarring from secondary infection can lead to cicatricial ectropion. In recurrent disease, keratitis of the epithelium or stroma and late corneal anesthesia or dry eye
Molluscum contagiosum	Conjunctivitis is associated with eyelid lesions, which can spontaneously resolve or persist for months to years	Conjunctival scarring, epithelial keratitis, pannus; less commonly subepithelial infiltrates/haze/scar, occlusion of the puncta, follicular conjunctivitis

TABLE 2 NATURAL HISTORY OF CONJUNCTIVITIS (CONTINUED)

Type of Conjunctivitis	Natural History	Potential Sequelae
Bacterial		
Nongonococcal	Mild: self-limited in adults. May progress to complications in children.	Rare, but possibly corneal infection, preseptal cellulitis
	Severe: may persist without treatment, rarely hyperacute	Corneal infection; may be associated with pharyngitis, otitis media, meningitis
Gonococcal		
Neonate	Manifests within 1–7 days after birth, later if a topical antibiotic was used. Rapid evolution to severe, purulent conjunctivitis.	Corneal infection, corneal scarring, corneal perforation, septicemia with arthritis, meningitis
Adult	Rapid development of severe hyperpurulent conjunctivitis	Corneal infection, corneal scarring, corneal perforation, urethritis, pelvic inflammatory disease, septicemia, arthritis
Chlamydial		
Neonate	Manifests 5–19 days following birth, earlier if placental membranes have ruptured prior to delivery. Untreated cases may persist for 3–12 months.	Corneal scarring, conjunctival scarring; up to 50% have associated nasopharyngeal, genital, or pulmonary infection
Adult	May persist if untreated	Corneal scarring, neovascularization, conjunctival scarring, urethritis, salpingitis, endometritis, perihepatitis, follicular conjunctivitis
Immune-mediated		
Ocular mucous membrane pemphigoid (OMMP)	Onset generally over age 60. Slowly progressive chronic course, sometimes with remissions and exacerbations.	Conjunctival scarring and shrinkage; symblepharon; trichiasis; corneal scarring, neovascularization, ulceration; ocular surface keratinization; bacterial conjunctivitis; cicatricial lid changes; severe tear deficiency; severe vision loss
Graft-versus-host disease (GVHD)	Can involve multiple tissues including skin, liver, gastrointestinal system, lung, and eye. Graft-versus-host disease may follow acutely within the first 3 months following hematopoietic stem cell transplantation, but ocular disease is more common in the chronic phase.	Conjunctivitis; subconjunctival fibrosis; symblepharon; lacrimal gland involvement; keratoconjunctivitis sicca; cicatricial lid disease. Less commonly limbal stem cell deficiency, corneal scarring, or intraocular involvement.
Stevens-Johnson syndrome	Involves the various mucous membranes including the gastrointestinal system, lung and eye following the systemic use of sensitizing medication	Conjunctival scarring and shrinkage; symblepharon; trichiasis; corneal scarring, neovascularization, ulceration; limbal stem cell deficiency; ocular surface keratinization; bacterial conjunctivitis; cicatricial lid changes; severe tear deficiency; severe vision loss
Neoplastic		
Sebaceous carcinoma	Occurs in fifth to ninth decades of life with fairly rapid progression[18]	Orbital invasion, regional or distant metastases, melanoma
Ocular surface squamous neoplasia	May be history of HPV, significant UV exposure, chronic inflammation; may be mistreated as an unresponsive blepharoconjunctivitis	Conjunctival hyperemia, carcinoma in situ, or ocular surface squamous neoplasia, which can be locally invasive with regional metastases
Melanoma	Significant UV exposure, previous history of melanoma, previous primary acquired melanosis (PAM) or nevus of Ota	Pigmented, or non-pigmented lesion, invasive regional metastases, history of previous melanoma, primary may not be conjunctiva