

Conjunctivitis



What is it?



Conjunctiva:

The conjunctiva is a mucous membrane, similar to mucous membranes elsewhere in the body. Conjunctivitis is one of the most common entities bringing patients to the Ophthalmologist.

Conjunctivitis:

Conjunctivitis is an inflammation that affects primarily the conjunctiva. The patient population includes individuals of all ages who present with symptoms suggestive of conjunctivitis such as red eye or discharge. Conjunctivitis is a group of diseases that occur worldwide and affect all ages, all social strata, and both genders. Although there are no reliable figures documenting the prevalence of conjunctivitis, this disease has been cited as one of the most frequent causes of self-referral in the practice of comprehensive ophthalmology. Conjunctivitis infrequently causes permanent visual loss or structural damage, but the economic impact of the disease in terms of lost work time is considerable.

Conjunctivitis can be classified as infectious or noninfectious and as acute, chronic, or recurrent. The causes of infectious conjunctivitis include viruses, bacteria, and Chlamydia. The causes of noninfectious conjunctivitis include the following:

- ◆ Allergy / immunity (e.g. hay fever / atopy, vernal allergy, contact hypersensitivity, contact lens solution reaction/medication allergy, ocular cicatricial pemphigoid—a rare autoimmune disease characterized by recurrent sub epithelial blisters of the skin and mucous membranes, and Stevens-Johnson syndrome.

- ◆ Mechanical causes / irritants (e.g. eyelashes, contact lenses, foreign bodies, self-inflicted irritation and floppy eyelid syndrome)
- ◆ Neoplasia—continuous, unregulated increase in cells growth in a tissue.
- ◆ Chemicals / toxins (e.g. medicaments and personal care products.)

Clinical evaluation of conjunctivitis:

The four main clinical features which should be considered in the diagnosis of conjunctivitis are:

- ◆ Type of discharge
- ◆ Type of conjunctival reaction
- ◆ Presence of pseudomembranes or true membranes
- ◆ Presence or absence of lymphadenopathy (enlarged lymphnodes).

Discharge:

The discharge is composed of the exudate that has filtered through the conjunctival epithelium from dilated blood vessels. The following are the main types of discharge:

- ◆ Watery—composed of a serous exudate and a variable amount of reflexly secreted tears. It is typical of viral and toxic inflammations.
- ◆ Mucoid—typical of vernal (seasonal) conjunctivitis and keratoconjunctivitis sicca.
- ◆ Purulent—occurs in severe acute bacterial infections.
- ◆ Mucopurulent—occurs in mild bacterial as well as chlamydial infections.

Pseudomembranes and membranes:

Pseudomembranes consist of coagulated exudate adherent to the inflamed conjunctival epithelium. The 4 main reasons are :

- 1) Severe adenoviral infection
- 2) Ligneous conjunctivitis
- 3) Gonococcal conjunctivitis
- 4) Autoimmune conjunctivitis.

True membranes form when the inflammatory exudate permeates the superficial layers of the conjunctival epithelium. The main causes are:

- 1) Beta hemolytic streptococci
- 2) Diphtheria

Lymphadenopathy (enlarged lymphnodes):

This is a feature of:

- 1) Viral infections
- 2) Chlamydial infections
- 3) Severe gonococcal conjunctivitis

Bacterial conjunctivitis:

Simple bacterial conjunctivitis is a very common and usually self-limiting condition. Presentation is with an acute onset of redness, grittiness, burning and discharge. On waking the eyelids are frequently stuck together and difficult to open as a result of the accumulation of exudate during the night. Both eyes are usually involved, although one may become affected before the other by a day or so.

Adult gonococcal keratoconjunctivitis:

Presents as a hyperacute, extremely profuse and thick creamy pus leaking from the eye.

Viral conjunctivitis:

Adenoviral keratoconjunctivitis:

There are two types (PCF and EKC) both of which occur as epidemics and are highly contagious for up to two weeks. The virus can spread from finger-to-eye contact so hand washing is extremely important. It presents with acute watering, redness, discomfort and photophobia. Both eyes are affected in about 60% of cases.

Chlamydial conjunctivitis:

This typically affects young adults during sexually active years. The eye lesions present about 1 week after sexual exposure. It usually presents as a unilateral chronic mucopurulent discharge. If untreated the disease has a prolonged remittent course.

Neonatal conjunctivitis:

This is defined as a conjunctival inflammation that occurs during the first month of life. The three main causes are:

- 1) Chlamydial—most common cause. Typically between 5 and 14 days with an acute mucopurulent discharge.
- 2) Gonococcal—rare cause. Usually between 1 –3 days after birth with a hyperacute purulent conjunctivitis.
- 3) Miscellaneous—may be caused by silver nitrate or antibiotics used as prophylaxis against gonococcal infection. It presents within a few hours of delivery or instilling the agent..

Allergic conjunctivitis:

Seasonal allergic (hay fever) conjunctivitis is a very common allergic reaction triggered by airborne antigens such as mould spores, pollen, grass, weeds, hair, wool and feathers. It presents with acute, transient attacks of itching, lacrimation and redness during the hay fever season.

The main symptoms are ocular itching which may be associated with lacrimation, photophobia, foreign body sensation and burning. Thick mucous discharge from the eyes and ptosis (droopy lids) also occur. The symptoms are characteristically worse during spring and summer.

Atopic keratoconjunctivitis:

This is relatively rare but potentially serious and typically affects young men with atopic dermatitis. In addition to the skin changes patients may also have asthma, hay fever, urticaria, migraines and rhinitis.

Autoimmune conjunctivitis

Cicatricial pemphigoid—blisters of the skin and mucous membranes. Primarily a disease of the elderly. Presents as irritation, burning and tearing.

Steven-Johnson Syndrome—presents as fever, malaise, sore throat and possible a cough and arthralgia which could last up to 14 days.

Chemical conjunctivitis:

Acid burns—usually less serious than alkalis because acids tend to coagulate and form a barrier preventing deep penetration. The main damage is therefore restricted to the lids, conjunctiva and cornea.

Alkaline burns—these are more serious. They disrupt the normal barriers of the cornea and rapidly increase the pH of the anterior chamber with resultant damage to the lens and anterior uvea. The late complications of alkali burns can give rise to cataract, uveitis and secondary glaucoma.

Miscellaneous conjunctivitis:

This includes some rare and uncommon systemic disorders.

Conclusion:

Early detection of conjunctivitis is important because conjunctivitis can signify serious systemic disease. For example, some types of neonatal conjunctivitis are associated with pneumonia, otitis media or Kawasaki's disease. In adults, conjunctivitis caused by pemphigoid, gonococcus, and Chlamydia is important to detect early because it is necessary to treat the concomitant systemic disorder. Early detection of conjunctivitis associated with local or systemic neoplasms may be lifesaving.

Counseling is imperative for all contagious varieties of conjunctivitis to minimize or prevent the spread of the disease in the community. Modes of transmission include sexual contact, eye-hand contact, instillation of contaminated droplets, and exposure to airborne pathogens.

Eye Care For You



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