

**Conjunctivitis, Trachoma, Pinguecula, Pterygium****CONJUNCTIVITIS****DEFINITION**

1. **Conjunctivitis** is the term applied to inflammation of the conjunctiva, the epithelial layer covering the inner side of the eyelids and the white of the globe of the eye.

**CLINICAL MANIFESTATIONS**

2. Conjunctivitis presents with one or more of the symptoms of grittiness, irritation, discharge (which may be watery or purulent), mild photophobia (dislike of bright light), swelling (chemosis) of the conjunctiva and redness (injection) of the eye.

**AETIOLOGY**

3. There are a number of different types of conjunctivitis, the aetiology of which is specific to the type.

**INFECTIVE CONJUNCTIVITIS****Viral**

4. **Adenoviruses** are a common cause of conjunctivitis. The conjunctival symptoms may be accompanied by upper respiratory tract symptoms or by corneal involvement (keratitis). Both forms occur in epidemics and are highly contagious. Spontaneous remission within 2 weeks is the rule.
5. An **acute haemorrhagic conjunctivitis** may occur with an enterovirus infection.

**Bacterial**

6. **Simple bacterial conjunctivitis** is a very common and self-limiting condition. The most common causative organisms are the staphylococci (epidermidis and aureus), but *Streptococcus pneumoniae* and *Haemophilus influenzae* are also frequent pathogens. Discharge is usually a feature and the condition is contagious, being transmitted by the discharge. It usually resolves within 10 to 14 days, with or without treatment.
7. **Adult gonococcal keratoconjunctivitis.** Gonorrhoea is a venereal infection caused by the bacterium *Neisseria gonorrhoea*. In addition to genitourinary symptoms, adults may present with very acute onset of a profuse thick purulent discharge from the eye, with severe conjunctival injection and swelling. There may also be corneal involvement (keratitis).

## Chlamydia

8. **Chlamydia trachomatis** is a Gram-negative coccus of wide distribution throughout the world which may cause two types of conjunctival infections: adult inclusion conjunctivitis (Trachoma Inclusion Conjunctivitis - TRIC) and trachoma.
9. **Adult inclusion conjunctivitis** typically affects young adults during the sexually active years. The infection is almost invariably venereal in nature and the eye lesions present about 1 week after sexual exposure. Presentation is usually with a unilateral chronic mucopurulent discharge which, if untreated, has a prolonged and remittent course.
10. **Trachoma** is usually subacute in onset and involves both the conjunctiva and the cornea. There is diffuse inflammation of the conjunctiva, with congestion, papillary enlargement and follicle formation. The upper eyelid is usually worst affected. Corneal involvement is initially a mild keratitis, which may then be complicated by lymphoid infiltration and the formation of a pannus, increased vascularisation of the cornea and, ultimately, opacification of the cornea. It is a disease of underprivileged populations with poor conditions of hygiene; the common fly is the major vector in the infection/re-infection cycle. Trachoma is the leading cause of preventable blindness in the world.

## Neonatal conjunctivitis (ophthalmia neonatorum)

11. **Chlamydial** infection is the most common cause of neonatal conjunctivitis. **Gonococcal infection**, by transmission from the mother during delivery, is uncommon nowadays. Staphylococcus aureus and Herpes simplex also cause conjunctivitis in the newborn.

## ALLERGIC CONJUNCTIVITIS

12. **Allergic conjunctivitis** is a reaction to contact with an allergen.
13. **Seasonal allergic conjunctivitis (hay-fever)** is the commonest form, triggered by airborne allergens such as pollens, mould spores, grass, horse hair and feathers.
14. **Acute allergic conjunctivitis** is an urticarial reaction caused by a large amount of allergen reaching the conjunctival sac. The condition commonly occurs in children playing in grass or with pets. Topical drugs used for the treatment of eye diseases may also cause an acute allergic response.
15. **Vernal keratoconjunctivitis** or spring catarrh is an uncommon bilateral condition affecting children and young adults. It is an allergic disorder in which IgE-mediated mechanisms play a part. The majority of affected individuals have a personal or strong family history of atopy and may have established eczema and/or asthma. Vernal keratoconjunctivitis is associated with an increased incidence of keratoconus.
16. **Atopic keratoconjunctivitis** is a rare but serious condition which typically affects young men with atopic dermatitis. They may also have asthma, hay fever, urticaria, migraine and rhinitis. Ocular symptoms usually develop several years after the onset of other atopic features.

## AUTOIMMUNE CONJUNCTIVITIS

17. The conjunctiva may be involved in systemic autoimmune diseases. The commonest are cicatricial pemphigoid, in which there are recurrent blisters of the skin and mucous membranes, and Stevens-Johnson syndrome (erythema multiforme), the most common precipitating factors of which are hypersensitivity to drugs (for example sulphonamides) and to infections caused by *Mycoplasma pneumoniae* and the Herpes simplex virus.

## CHEMICAL CONJUNCTIVITIS

18. Chemical burns to the eye are potentially blinding. Damage to the eye from **acid burns** tend to be restricted to the lids, conjunctiva and cornea, causing intense local irritation. Alkali burns cause more extensive damage to the eye, with involvement of internal structures also. After the initial acute inflammatory reaction of the conjunctiva, scarring and cicatrization may occur.

## DEGENERATIVE CONDITIONS OF THE CONJUNCTIVA

19. A **pinguecula** is a common degenerative lesion which consists of a yellow-white deposit on the bulbar conjunctiva adjacent to the nasal or temporal aspect of the limbus. Pingueculae are usually found in elderly people, especially those who have been chronically exposed to strong sunlight, dust and wind.
20. A **pterygium** is a triangular sheet of fibrovascular tissue arising from the conjunctiva and which invades the cornea. It is generally symptomless, but vision may be impaired if the corneal lesion encroaches on the visual axis or where fibrosis results in astigmatism. Pterygia are common in people living in hot climates and may represent a response to chronic exposure to dry conditions and sunlight. A pterygium may develop from a pinguecula.
21. Other commonly found degenerative conditions of the conjunctiva are **concretions** and **retention** cysts.

## CONCLUSION

22. **Conjunctivitis** is an inflammation of the lining membrane of the eye. It may result from infection, allergy, autoimmune disease or chemical insult.
23. **Pinguecula** and **pterygium** are degenerative conditions of the conjunctiva which occur commonly in sunny dry climates, where chronic exposure to ultraviolet light in sunlight and to dry dusty conditions are probably aetiological factors.

## REFERENCES

- Kanski Jack J. Clinical Ophthalmology. 3<sup>rd</sup> Ed. 1994. Oxford. Butterworth Heinemann. Disorders of the Conjunctiva. 4.72-4.97
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